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THE JOURNAL

OF THE

SOUTH AFRICAN ORNITHOLOGISTS' UNION.

EDITED BY

Dr. J. W. B. GUNNING,  
ALWIN HAAGNER, F.Z.S., and B. C. R. LANGFORD.

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VOLUME V.

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## P R E F A C E.



THIS number completes Volume V. of the Journal of the South African Ornithologists' Union.

An apology is necessary for its belated appearance. It should have been published in December 1909, and the MS. was sent to England in October, but the London Agents who had the preparation of the Indexes in hand could not get them out in time, hence the delay.

We must again appeal to the Members of the Union for more support, both as regards matter for the Journal and as regards the question of Migration.

THE EDITORS.



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# ROLL OF MEMBERS

AS AT 31ST AUGUST, 1909.

No.	Year of Election.	Name and Address.
	1909	ABDY, Col. A. J., R.A.; Potchefstroom.
	1905	ANDERSSON, C. L.; Box 2162, Johannesburg, Tvl.
	1907	BAXTER, G. L., Lieut. Q. O. Cameron Highlanders.
	1906	BELL, THEODORE; Downside, Epsom, Surrey, England.
5	1907	BOLUS, FRANK; Sherwood, Kenilworth, Cape Town.
	"	BOOTH, H. B.; "Ryhill," Ben Rhydding, Yorkshire, England.
	1905	BOURKE, E. F.; Box 321, Pretoria, Tvl.
	1904	BRIDGEMAN, R. O. B., Lieut. R.N.; Weston Park, Shipnal, Salop, England.
	1907	BRISCOE, Dr. J. E.; Charlestown, Natal.
10	"	CALVERLEY, Major, Govt. Librarian, O.R.C.; Bloemfontein, O.R.C. (Govt. Offices).
	1908	CHAMBERS, ROLAND, R.M.; Bethulie, O.R.C.
	1907	CHUBB, E. C.; Box 240, Bulawayo, S. Rhodesia.
	1909	CLARK KENNEDY, J.; Standerton, Tvl.
	1906	COCH, MAX; Rietfontein Lazaretto, Box 1076, Johannesburg.
15	"	COOPER, C. W.; address unknown.
	1907	DAVIES, C. G., Sgt. C.M.R.; Bizana, Pondoland, C.C.
	1904	DAVY, J. BURTT, F.L.S., F.R.G.S., Govt. Botanist; Dept. of Agriculture, Pretoria, Tvl.
	1907	DAY, M. F., Lieut. K.O. Yorkshire L.I.; Cantonments, Pretoria, Tvl.
	1906	D'EVELYN, Dr. F. W.; 2103 Clinton Av., Alameda, California, U.S.A.
20	1905	DRAPER, E. H. U.; Govt. Laboratories, P.O. Box 1080, Johannesburg, Tvl.

No.	Year of Election.	Name and Address.
	1905	DUERDEN, Professor J. E.; c/o Albany Museum, Grahamstown, C.C.
	,,	EVANS, J. B. POLE; Dept. of Agriculture, Pretoria, Tvl.
	1904	FAIRBRIDGE, W. G.; 141 Longmarket Street, Cape Town, C.C.
	,,	FELTHAM, H. L. L., F.E.S.; P.O. Box 46, Johannesburg, Tvl.
25	,,	FRY, HAROLD A.; P.O. Box 46, Johannesburg, Tvl.
	1907	GILFILLAN, D. F.; Box 1397, Johannesburg, Tvl.
	1909	GODFREY, Rev. J.; Pirie Forest Mission, Kingwilliamstown, C.C.
	1905	GORDON, Capt. C. W.; The Castle, Cape Town, C.C.
	1906	GOUGH, LEWIS H., Ph.D.; Box 593, Pretoria, Tvl.
30	1907	GOVERNMENT LIBRARIAN; Govt. Offices, Bloemfontein, O.R.C.
	1908	GRAHAM, FRANCIS, C.C. & R.M.; Grahamstown, C.C.
	1905	GRANT, C. H. B.; Natural History Museum, S. Kensington, London, England.
	,,	GREATHEAD, Dr. J. B.; Greystones, Grahamstown, C.C.
	1906	GRÖNVOLD, HENRIK; Natural History Museum, South Kensington, London, England.
35	1904	GUNNING, J. W. B., M.D., F.Z.S.; Director, Museum and Zoological Gardens, Pretoria, Tvl.
	,,	HAAGNER, ALWIN K., F.Z.S., Col.M.B.O.U., Superintendent Tvl. Zoological Gardens, Pretoria.
	1909	HALE, P. E., Insp. O.R.C. Police; Bethlehem, O.R.C.
	1907	HALHEED, N. G. B., 3rd Battn.; Egyptian Army, Khartoum.
	1908	HAMILTON, Major J. S.; Superintendent, Game Reserves, Komati Poort, Tvl.
40	1906	HAMOND, PHILIP, Lieut. 2nd Norfolk Regt.; East Dereham, Norfolk.
	1909	HARDIMAN, E. H. M.; Wepener, O.R.C.
	1905	HATCHARD, J. G., F.R.A.S.; Loco. Drawing Offices, C.S.A.R., Bloemfontein, O.R.C.

No.	Year of Election.	Name and Address.
	1905	HORSBRUGH, Major BOYD, A.S.C.; c/o Cox & Co., Bankers, 16 Charing Cross, London.
	,,	HOWARD, C. W.; Dept. of Agriculture, Lourenço Marques.
45	1908	HOWARD, JAMES L.; Yankee-Doodle Mine, Selukwe, S. Rhodesia.
	1907	HUDSON, C. E.; Dept. of Agriculture, Bloemfontein, O.R.C.
	,,	INGLE, J. C., F.Z.S.; P.O. Sabie, Lydenburg, Tvl.
	1905	INNES, Dr. WALTER, M.B.O.U.; School of Medicine, Cairo, Egypt.
	1908	IVY, J. ROBSON; Taxidermist, Grahamstown, C.C.
50	1905	IVY, ROBERT H., F.Z.S.; Grahamstown, C.C.
	1906	JACKSON, BEDVER; Govt. Offices, Bloemfontein, O.R.C.
	1904	JEPPE, JULIUS; P.O. Box 60, Johannesburg, Tvl.
	1905	JOHNSTON, C. McG.; Bloemfontein Club, Bloemfontein, O.R.C.
	1909	JOHNSTON, K. C.; Westminster, O.R.C.
55	1905	JONES, A. C. H., Capt. 5th Fusiliers; c/o Staff-Captain, i/c Reconnaissance Surveys, The Castle, Cape Town.
	1904	KIRBY, W.; Intermediate Pumping Station, Waterworks, Kimberley, C.C.
	,,	KIRKMAN, Dr. A., M.D.; Touws River, C.C.
	1907	KNAPP, Col.; Kingwilliamstown, C.C.
	1904	LANGFORD, B. C. R.; P.O. Box 557, Pretoria, Tvl.
60	1906	LITTLEDALE, H. A. P., Lieut. K.O.Y.L.I.; Roberts Heights, Pretoria, Tvl.
	1905	LOUBSER, M. M.; Port Elizabeth, C.C.
	1908	MALLY, C. W., M.Sc.; Eastern Province Entomologist, Grahamstown, C.C.
	1904	MARSHALL, G. A. K., F.Z.S., F.E.S.; P.O. Box 149, Salisbury, Mashonaland.
	1905	MARTHINIUS, Dr. J. G.; District Surgeon, Wepener, O.R.C.
65	1904	MILLAR, A. D., Col.M.B.O.U.; 298 Smith Street, Durban, Natal.
	1908	MORS, F. E. O.; Box 776, Pretoria, Tvl.

No.	Year of Election.	Name and Address.
	1905	MURRAY, J. P. ; Maseru, Basutoland.
	1907	NEETHLING, HARRY ; address unknown.
	1906	NEHRKORN, ADOLF ; Adolfstrasse, Braunschweig, Germany.
70	„	NEWMAN, T. H., F.Z.S., M.B.O.U. ; Newlands, Harrowdene Road, Wembley, England.
	„	NOOME, F. O. ; c/o Transvaal Museum, Pretoria, Tvl.
	1905	OBERHOLSER, HARRY C. ; Biological Survey, Washington, D.C., U.S.A.
	1904	PEASE, Sir ALFRED E., Bart., F.Z.S., M.B.O.U. ; Barberton, Transvaal.
	„	PERCIVAL, A. B., F.Z.S., M.B.O.U. ; Nairobi, Brit. East Afr. Protectorate.
75	1907	PÉRINGUEY, Dr. L., F.Z.S., &c. ; Director S.A. Museum, Cape Town, C.C.
	1905	PERSHOUSE, STANLEY, Border Regt. ; c/o Miss Findlay, 9 St. Leonard's Road, Exeter, England.
	1908	PHEAR, H. H. ; Box 424, Kimberley.
	1907	PICKSTONE, S. P. ; Box 4820, Johannesburg.
	1906	POGGÉ, C. ; Conservator of Forests, Windhuk, Damaraland.
80	1907	PRITCHARD, A. G. R. ; Box 4820, Johannesburg.
	1904	PYM, FRANK A. O. ; Public Museum, Kingwilliams-town, C.C.
	„	ROBERTS, AUSTIN ; Box 413, Pretoria, Tvl.
	1907	ROBERTS, Rev. Noel ; English Church, P.O. Gezina, Pretoria, Tvl.
	1908	ROBERTSON, Dr. W. ; Bacteriological Institute, Grahamstown.
85	„	SCLATER, ARTHUR L. ; " Helvetia," Southern Melsetter, S.E. Rhodesia.
	1906	SHEPPARD, P. A. ; Mile 23, M'Zimbiti, Beira, P. E. A.
	1904	SKEA, ERNEST M. ; Box 373, Pretoria, Tvl.
	„	SPARROW, R., M.B.O.U., Major 7th Dragoon Gds. ; Rookwoods, Sible Headingham, Essex, England.
	„	SPICER, NEWTON ; Box 404, Pretoria, Tvl.
90	1905	SWINBURNE, JOHN, M.B.O.U. ; Rand Nat. Labour Assoc., Pietersburg, Tvl.
	1904	SWINNY, H. H. ; Port St. John, West Pondoland.

No.	Year of Election.	Name and Address.
	1907	SWYNNERTON, C. F. M.; Gungunyana, Melsetter Dist., S. Rhodesia.
	1905	TAYLOR, C. H.; Grassridge, P.O. Bankop, Ermelo.
	1904	TAYLOR, L. E.; Assist. Conservator of Forests, Dept. of Agriculture, Pretoria, Tvl.
95	1907	THEILER, Dr. A., Govt. Veterinary Bacteriologist; Box 385, Pretoria, Tvl.
	1909	THOMPSON, CHAS. S.; High School, San Bernardino, California, U.S.A.
	1906	THOMSEN, F.; c/o Govt. Entomologist, Govt. Bldgs., Pretoria, Tvl.
	1909	TOWNSEND, S. F.; Bulawayo, Rhodesia.
	1908	TYRRELL, E. G. HARCOURT; Greytown, Natal.
100	1909	UPTON, Capt. C., A.S.C.; Tempe, Bloemfontein.
	1906	VAUGHAN-KIRBY, F., F.Z.S.; Sunnyside, Pretoria, Tvl.
	1905	WIGLESWORTH, J., M.D., M.B.O.U.; Rainhill, Liverpool, England.
	1906	WOOD, A. R., A.R.M.; Wepener, O.R.C.
	1904	WOOD, JOHN; Box 363, East London, C.C.
105	1905	WORKMAN, W. H., M.B.O.U.; Lismore, Belfast, Ireland.

*Hon. Members.*

1	1909	ALLEN, Dr. J. A.; Amer. Museum of Nat. Hist., Washington.
2	1908	BUCKNILL, The Hon. J. A., M.A., F.Z.S.; The King's Advocate, Nicosia, Cyprus.
3	1907	HARTERT, Dr. E.; Director Tring Museum, Tring, Herts, England.
4	1909	HERMAN, Dr. OTTO; Hung. Central Bureau of Ornithology, Budapest.
5	1904	REICHENOW, Dr. A.; Kaisl. Zool. Museum, Invalidenstrasse, Berlin, Germany.
6	„	SCLATER, P. L., D.Sc., F.R.S.; Odiham Priory, Winchfield, Hants, England.

No.	Year of Election.	Name and Address.
7	1907	SCLATER, W. L., M.A., F.Z.S. ; 1511 Wood Avenue, Colorado Springs, Colorado, U.S.A.
8	1904	SHELLEY, Capt. G. E., F.Z.S. ; 39 Egerton Gardens, London.
9	,,	TRIMEN, R., F.R.S. ; c/o Entomological Society, London, W.

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PLATE I. (to face p. 16).

*Heliospiza noomeæ* and *Agapornis nigrigens*.



## PROCEEDINGS OF THE UNION.

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### ACCOUNT OF THE SIXTH ANNUAL MEETING.

THE Sixth Annual Meeting of the S. A. O. U. was held in Bloemfontein on the 30th September, 1909, at 10 A.M., in the Normal College. Present were :—Dr. J. B. Greathead (Norvals Pont), J. P. Murray (Maseru) ; C. McG. Johnston, Captain Upton, A.S.C., C. E. Hudson, J. G. Hatchard, F.R.A.S., of Bloemfontein ; L. E. Taylor F.Z.S., E. M. Skea, and A. K. Haagner (Honorary Secretary), of Pretoria.

In the unavoidable absence of the President (Dr. J. E. DUERDEN), Dr. GREATHEAD was nominated to the Chair.

*Migration.*—The question of extending the observations in South Africa was thoroughly discussed. Mr. TAYLOR suggested that Storks might be captured and ringed in this country ; but Mr. HAAGNER pointed out that these birds were ringed in the nest in Europe and anticipated a lot of trouble in accomplishing this out here, fearing even that it was impossible.

Mr. TAYLOR further wished to emphasise that South African migrants should also be reported upon and that we should not only confine ourselves to oversea migrants. Mr. MURRAY suggested that the marking of Quail would throw some light on the present mystery of their movements. Mr. JOHNSTON moved that as the Transvaal Museum had done so much in the cause of ornithology, that institution be requested to be good enough to issue to schools in the O.R.C. and Transvaal a set of skins of the birds upon which data are

required—the main reason of this being to ensure accuracy in the determination of the species by the uninitiated. This was carried with a rider that the other Museums be requested to do likewise in their respective Colonies.

*Accounts.*—The Statement of Receipts and Expenditure for the past year, duly audited by Messrs. Langford & King, was passed. A copy follows this account of the Meeting.

The Secretary's Report was read and passed.

The Report follows :—

#### SECRETARY'S REPORT.

The last Meeting of the S. A. O. U. was held, as you are all aware, at Grahamstown, in conjunction with that of the S. A. A. S., between the dates of 6th and 12th July, 1908, under the Presidency of Dr. J. E. DUERDEN, M.Sc., Professor of Zoology, Rhodes University College.

This was an exceedingly successful meeting—so much so that it was decided to repeat the experiment this year and hold our meeting at Bloemfontein, again in conjunction with that of the S. A. A. S.

*Publications*—Last year (1908) the Union issued three numbers of the Journal, containing 149 pp. letterpress, and 1 coloured and 5 photographic plates. This year two numbers have been issued up to date, containing 121 pp. letterpress and one hand-coloured lithographic plate. The third and final No., to complete Vol. V., will appear shortly.

Besides the Journal, No. 1 of the 'Popular Bulletins' (South African Birds of Prey, in relation to Man) was published last year and No. 2 (a Short History of Ornithology, with special reference to South Africa) this year—both by the Hon. Secretary.

*Migration Survey.*—The First Report, published in the 2nd No. of Vol. IV. (October 1908), was very favourably received and commented upon by our European colleagues, notwithstanding the paucity of the data. The Report of 1908 and 1909 will appear in the first part of Vol. VI.; and while the number of observations have increased, I have

again to draw the attention of Members to this important work and to beg of them a little more co-operation. In order to attain anything like success we require a great many more observing stations. To endeavour to enlist the practical sympathy of teachers I propose giving a short discourse on birds illustrated by the lantern, and will then point out the difference between the European and White-throated Swallows.—This year is a record one, so far as Migration is concerned, as no less than four ringed White Storks (*Ciconia alba*) have been obtained in South Africa: one in the Kalahari, one in Polela, Natal (liberated by the Royal Hungarian Bureau of Ornithology), and two in Basutoland (liberated by the Vogelwarte, Rossitten, Germany). It therefore behoves all South African ornithologists to keep a keen look-out for these marked Storks in future. The fact that Storks from North Germany migrate as far south as Central and South-Central South Africa is now established beyond a doubt.

In recognition of the work done by the S. A. O. U. in this direction, the Hungarian Department of Agriculture has conferred upon your Secretary the Diploma of Honorary Membership of the Royal Hungarian Bureau of Ornithology.

*Membership.*—The additions since last meeting number 10 new Members, and the resignations 3.—I would also ask for the necessary permission to remove 10 Defaulters from the Roll, whose subscriptions are more than two years in arrear. Most of these Members have left South Africa and all trace of them has been lost. The number of Members at date is 109 Ordinary and 8 Honorary.

*Finance.*—The Cash Statement explains itself. The Union has about £30 in hand at date, while there is about £60 still outstanding.

Pretoria,  
September 20, 1909.

A. K. HAAGNER,  
Sec. & Treas. S. A. O. U.

*Officers for 1910.*—The office-bearers for 1910 were elected as follows :—

*President* . . . . Dr. J. W. B. GUNNING, Director Transvaal Museum and Zoological Gardens, Pretoria.

*Vice-Presidents* . . { Dr. DUERDEN, M.Sc.  
Dr. PÉRINGUEY, F.G.S.  
A. D. MILLAR, Esq., Col.M.B.O.U.

*Hon. Secretary* {  
*and Treasurer* { . . A. K. HAAGNER, F.Z.S., &c.

*Assistant-Secretary* . E. M. SKEA.

*Editorial Committee* . The retiring Members, Dr. GUNNING and Mr. HAAGNER, were re-elected.

<i>Members of Council</i> .	{	L. E. TAYLOR . . . . .	Transvaal.
		C. McG. JOHNSTON . . . .	O. R. C.
		J. A. O. PYM . . . . .	Cape Colony.
		Dr. J. E. BRISCOE . . . . .	Natal.
		J. P. MURRAY . . . . .	Basutoland.
		P. A. SHEPPARD . . . . .	Port. East Africa.
		E. C. CHUBB, F.Z.S. . . . .	Rhodesia.
		C. POGGÉ . . . . .	German S.W. Africa.

*New Members.*—The following new Members were duly elected :—

Col. A. J. ABDY (Pretoria); Rev. J. GODFREY and Col. KNAPP (Kingwilliamstown); D. GUNN (Kroonstad); E. H. M. HARDIMAN (Wepener); P. E. HALE (Bethlehem); K. C. JOHNSTON (Westminster); C. S. THOMPSON (California); S. F. TOWNSEND (Bulawayo); Capt. C. UPTON (Bloemfontein).

*Hon. Members.*—Dr. OTTO HERMAN and Dr. J. A. ALLEN were elected Hon. Members.

\* The SECRETARY notified the Meeting of the resignation of 3 Members, and 8 more were removed from the roll for non-payment of subscriptions.

*Protection of Game-Birds.*—Mr. JOHNSTON notified the Meeting that he was endeavouring to obtain a total protection of all Game-Birds in the O. R. C. for three years, on account of their usefulness in the destruction of white ants and other



insect pests. On the motion of Mr. MURRAY, seconded by Mr. HAAGNER, it was decided to notify all Divisional Councils in South Africa of a resolution stating that the opinion of the Meeting was strongly in favour of a law prohibiting the export of game from one Colony to another for the purpose of sale.

The close-season for Partridges in the O. R. C. was brought up on the motion (by letter) of Mr. HARDIMAN, of Wepener ; but after some discussion the matter was left in the hands of Mr. JOHNSTON, Member of Council for O. R. C., for further investigation.

A vote of thanks to the Chairman for presiding, and to the Hon. Sec. for his past services, concluded a very successful meeting.

The following excursions and amusements were attended by Members of the Union :—

October 29, 1909. Visit to the Military Cantonments at Tempe. (Exhibition of quick-firing guns, polo match, and tea. Host : Col. HULEATT, R.E.)

At Home, 9 P.M., at Government House (His Excellency Sir HAMILTON GOOLD-ADAMS).

October 30, 1909. Visit to the O. R. C. Museum.

November 1, 1909. Visit to Maseru, Basutoland.

## SOUTH AFRICAN ORNITHOLOGISTS' UNION.

*Cash Statement, 1908.*

1908.		£	s.	d.		£	s.	d.
Jan. 1.	Cash on hand .....	40	14	5				
	Subscriptions .....	95	8	9				
	Sales of Journal ..	9	15	6				
	Illustration Fund .....	2	12	6				
	Advertising .....	15	0					
	Printing and issuing Journal .....	....			71	7	5	
	Postages and Stationery .....	....			11	16	8	
	Illustrations .....	....			12	10	9	
	Commission and Bank Charges ....	....			2	13	0	
	Sundry Expenses .....	....			7	12	0	
	Covers and Binding .....	....			1	11	9	
	Migration Survey .....	....				9	6	
	Other Publications .....	....			2	9	4	
Dec. 31.	Balance on hand ....	....			46	5	11	
	a/c R. H. Porter, unpaid .....	7	10	2				
					<u>£156</u>	<u>16</u>	<u>4</u>	<u>£156</u>
								<u>16</u>
								<u>4</u>

A. K. HAAGNER,

*Secretary and Treasurer S. A. O. U.*

Accounts audited by

H. E. KING and B. C. R. LANGFORD.

THE JOURNAL  
OF THE  
SOUTH AFRICAN ORNITHOLOGISTS' UNION.

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Vol. V.

APRIL 1909.

No. 1.

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I.—*Fifth Annual General Meeting.*

THE Fifth Annual General Meeting was held, in affiliation with the meetings of the South African Association for the Advancement of Science, at Grahamstown. The visitors arrived on Monday the 6th of July, and in the evening were accorded a reception, by the Mayor and Corporation of Grahamstown, in the Town Hall. This was preceded by the Address of the President of the S. A. A. A. S. (Sir Walter Hely-Hutchinson, Governor of Cape Colony), and the presentation to Dr. A. Theiler of the British Association's Medal for scientific research. On Tuesday morning (7th July) the Members of the Association and Union were welcomed at the Rhodes University College by the Hon. Mr. Justice Kotze, LL.B., K.C., Chairman of the College Council, and in the afternoon a party of the Members proceeded to Eagle-nest Kloof and viewed the nest of *Spizaetus coronatus* illustrated in Dr. Stark's 'Birds of S. Africa,' vol. iii. p. 308.

The cave in which Stark took shelter during his sojourn in the kloof was also seen. In the evening Members attended Professor Cory's lecture, illustrated by lantern-views, on the history of the Eastern Province.—On Wednesday the Members of both Societies and their friends

travelled to Port Alfred by train, where they were taken up the beautiful Kowie River in a motor-launch and subsequently partook of luncheon in the Marine Hall, returning to Grahamstown at 6.30 P.M. The evening was spent at an entertainment provided by the Grahamstown Athenæum.

On Thursday at 9 A.M. the Members assembled in the Zoological Laboratory of the Rhodes University College, for the Fifth Annual General Meeting, which was followed by the President's Address. A detailed account of the meeting and abstract of the Address appear below. In the afternoon the visitors were driven round the famous Mountain Drive and given tea on Signal Hill, whence a magnificent view of the surrounding country with its wooded kloofs was obtained. In the evening Members attended a lecture on Subtropical Diseases by Dr. A. Theiler, C.M.G., which was illustrated by lantern-views.

On Friday the collections in the Albany Museum were examined under the guidance of Dr. Duerden. Through the courtesy of the authorities, and with the assistance of Miss Baines, Members had access to the collection of bird-skins at any time during their stay in Grahamstown. In the afternoon the visitors were driven out to "Table Farm," Mr. C. White's Ostrich-farm, and there inspected modern methods of farming these huge birds under the guidance of Dr. Duerden, President S.A.O.U. In the evening the Members assembled in Dr. Duerden's house and discussed matters remaining over from the Annual Meeting.

The visitors departed on Monday, 13th July, at 9 A.M., having been most hospitably entertained by the inhabitants of Grahamstown.

#### PROCEEDINGS, FIFTH ANNUAL MEETING.

The Fifth Annual General Meeting was held in the Zoological Laboratory of the Rhodes University College, at 9 A.M. on Thursday morning, 9th July, Dr. Duerden, M.Sc., Professor of Zoology at the College, President S.A.O.U., in the Chair. Also present were Doctors Gunning (Vice-President)

and Theiler of Pretoria, Dr. Robertson of Grahamstown, Messrs. J. Burt Davy, F.L.S. &c., and E. M. Skea (Pretoria), C. W. Mally, M.Sc., Robert H. Ivy and J. Robson Ivy (Grahamstown), F. A. O. Pym (Kingwilliams-town), and A. K. Haagner, Hon. Sec. (Modderfontein), and a number of non-members.

After the minutes had been read and accepted the Hon. Secretary read his report, a brief outline of which is as follows :—There were 16 new Members for election ; seven resignations had been sent in during the year, and five Members were to be removed for non-payment of subscriptions. This left the roll of Members at date of meeting at 119 Ordinary and 7 Honorary Members. Seven numbers of the Journal had been issued to date; the Migration Survey had been started, and the first report, then in the press, would be published in the October No. of the Journal. From this report it was hoped that Members would perceive the necessity of closer co-operation to ensure the success of this important work. The report as well as the Treasurer's statements were adopted. A lengthy discussion took place over the future policy and character of the Journal, and it was finally decided that it should be open to scientific matter only, and plates of scientific value, and that papers of a popular nature should be published in a separate series to be known as "Popular Bulletins." The following new Members were declared duly elected :—Messrs. Graham (C.C. & R.M.), Dr. Robertson, C. W. Mally, M.Sc., and J. R. Ivy, of Grahamstown ; E. G. Harcourt-Tyrrell, of Greytown, Natal ; J. Heward, of Selukwe, Rhodesia, and Rev. S. S. Dornan (Bulawayo) ; Messrs. Mörs and C. Wilde of Pretoria, F. Bolus (Cape Town), Major Calverly (Bloemfontein), R. Chambers, R.M. (Bethulie, O.R.C.), D. F. Gilfillan (Johannesburg), Major Hamilton (Komati-poort), A. L. Selater (Helvetia, S. Rhodesia), and H. H. Phear (Kimberley).

The resignations of the seven gentlemen were accepted with regret, and the five defaulters were removed from the Roll of Members.

The office-bearers for 1909 were elected as follows :—

*President* : Dr. J. E. DUERDEN, M.Sc.

*Vice-Presidents* : Dr. J. W. B. GUNNING.

Dr. L. PÉRINGUEY.

A. D. MILLAR, Col. M.B.O.U.

*Hon. Secretary* : A. K. HAAGNER.

*Hon. Treasurer* : A. K. HAAGNER.

Mr. Spicer, having tendered his resignation as Hon. Treasurer, the thanks of the meeting were unanimously voted to this gentleman for the able work executed by him during his tenure of office.

*Members of Council* :—Cape Colony : F. A. O. PYM (Kingwilliamstown). Transvaal : A. DUNCAN (Johannesburg). O.R.C. : C. McG. JOHNSTON, Bloemfontein. Natal : Dr. J. E. BRISCOE (Charlestown). Basutoland : J. P. MURRAY (Maseru). Rhodesia : E. C. CHUBB, F.Z.S. (Bulawayo). Portuguese S.E. Africa : P. A. SHEPPARD (Beira). German S.W. Africa : C. POGGÉ (Windhuk).

It was decided to hold the Meeting in 1909 at Bloemfontein, again in affiliation with the S.A.A.A.S.

The following papers were submitted and will be published in the 'Journal' or 'Bulletins' as stated below :—

1. Presidential Address. Dr. J. E. DUERDEN. Full text in 'Popular Bulletins.'
2. "History of Ornithology in S. Africa." A. K. HAAGNER, Hon. Sec. 'Popular Bulletins.'
3. "Birds in Relation to Insect Pests." C. W. MALLY, M.Sc., East Prov. Entomologist. 'Popular Bulletins.'
4. "Notes on Birds collected in Beira, Port. E.A." P. A. SHEPPARD. 'Journal.'
5. "*Pyromelana oryx* and its Nesting Parasites." Rev. N. ROBERTS. 'Journal.'
6. "Notes on Migratory Birds at Komatipoort." Major J. STEVENSON HAMILTON. 'Journal.'

II.—*Presidential Address.—The Domesticated Ostrich in South Africa.* By J. E. DUERDEN, Ph.D., M.Sc., Professor of Zoology, Rhodes University College.

GENTLEMEN,—

It might be expected that the Presidential Address at the Annual Meeting of the South African Ornithologists' Union would be devoted to a survey of the year's work in Ornithology, or at least directed to some phase of ornithology as the subject is usually understood. I must, however, confess that I am incapable of such a task, and should feel that I were here under false pretences were it not that your Council was fully aware of my deficiency in this respect at the time it invited me to this honourable position. Lest you should be disappointed by the absence of this traditional accompaniment of an annual gathering, namely a survey of the year's work, I have ventured to ask the Secretary to perform the duty for me ; and I am sure you will agree with me that the task could not have been placed in abler hands, for I make bold to say there is no one in South Africa working more successfully upon birds than he, no one doing more for the cause of ornithology, even beyond his arduous duties of Secretary of this Union and Editor of its Journal.

There is one step forward in South African ornithology, however, which I cannot permit to pass unnoticed. I refer, of course, to the recent appearance of the book 'Sketches of South African Bird Life,' by Mr. Haagner and Mr. Ivy. When I think of the circumstances under which the work has been produced I marvel at the degree of success which has crowned the endeavour, and sincerely desire to congratulate the authors upon their production and to wish it all success. The book is bound to have much influence in stimulating a popular interest in the subject to which both writers are so earnestly devoted, and has received very favourable reviews from many independent sources.

Having confessed myself in the matter of the neglect of a

strictly ornithological address, and given myself the pleasure of expressing my appreciation of the ornithological book of our year, I shall now ask for your indulgence towards a subject which the Secretary announced at a very early stage in our arrangements, one to which I have for the last two years, amidst many other duties, given considerable attention, namely, the bionomics of the domesticated Ostrich in South Africa.

The Ostrich must ever have an interest for a zoologist in South Africa, whether regarded from a purely scientific point of view or from its great economic importance. It is the largest living bird in existence, a kind of "left-over," as it were, from a past state of affairs. In it we have before us a straightforward instance of a bird originally wild being brought under a high state of domestication; we still have numbers in their primitive wild condition, while there are now hundreds of thousands subjected to farming influences. We can observe the changes which the Ostrich is undergoing as a result of fundamental modifications in its environment, probably better than in the case of any other domesticated animal. The production of feathers has reached an intense degree of specialization, equal to that of many of the older animal or vegetable products of value to man. The plumes are studied in all their details with the same degree of thoroughness we give to the productions of sheep or cattle, or of the vine and the cereals; and I see no reason why the term ornithologist may not be extended to one who studies the domesticated Ostrich in all its phases, with a view to arriving at the solution of the scientific problems underlying its altered existence.

We are living in an age when everywhere there is a demand that the forces of science should be devoted to the solution of such problems as will assist man in the better knowledge and control of nature; and especially is this the case in South Africa, where nature is often so wayward and there are so few to direct her. As Zoologists we have probably all been trained under the influence best expressed by the aphorism, "science for science's sake"; a principle it



was very necessary to strive for in the early days of scientific research, before its intrinsic value was appreciated, but this having been conceded we can now with satisfaction take the wider view, and, where possible, show the relationship of whatever we achieve to human welfare. If I may be pardoned for introducing a word of personal reference, I should like to say that on coming to South Africa, three years ago, my interest was drawn to the Ostrich from the standpoint of what we are pleased to call pure scientific research. It was only after gaining an acquaintance with the many difficulties and troubles under which the industry is carried out, that I was convinced it was one's duty to embrace in the research aspects which would have a bearing upon some of the practical problems presented by the Ostrich, and thus, if possible, contribute something to advance both science and its applications in the Colony in which our lot is cast. I shall attempt to give you some account of how the Ostrich industry is carried on at the present time, indicating some of the questions, both of practical and scientific interest, which call for solution \*.

### *Methods of Ostrich-Farming.*

After a brief historical introduction the various methods of Ostrich-farming followed in South Africa were described. It was shown that these have all been evolved within the past forty years or so, and differ greatly according to the nature of the veld, whether capable of irrigation or not, and the nature of the farmer, whether progressive or conservative. The fact that the industry is fairly lucrative under proper management has served as a great stimulus to a large proportion of the farmers, and at the present time many improvements and advances in methods are in progress. Probably more than with any other stock, the problems involved in successful Ostrich management call for high intelligence, ability, and experience on the part of the farmer.

\* What follows is only an abstract of the paper submitted: the complete paper will be published elsewhere.

It is found that birds thrive best, are freest from diseases, and give the strongest and richest feathers when subjected to a variety of conditions, such as was possible in their free, wild state. The combination of lucerne or rape pasturage and natural veld, now generally adopted, unquestionably gives the best results. Variety of food and conditions is one of the great secrets of successful Ostrich-farming, but there is still much to be learnt and many improvements to be made before the management of the bird can be said to have reached the highest success. For Ostrich-farming to be worthy of the name, the birds will have to be kept under effectual control, not left to wander unnoticed for months on the open veld ; the farms will have to be divided more and more by fencing, so that the flocks can be kept under closer observation, and better account taken of their condition. The industry is becoming more intensive year by year, and it is encouraging to record that the majority of the farmers are endeavouring to keep pace with its progress. Whatever other advantage may have come from the high price of feathers, one of the chief benefits to the Colony has been the stimulation and opportunity it has given towards developing the best there is in both the farmer and his land.

#### *Value of Feathers.*

The Ostrich is farmed solely for the feathers which it produces ; there is no other use to which any part of the bird is applied. From their gracefulness and delicacy when curled ostrich-plumes are peculiarly suitable objects for personal adornment, and in one form or another seem to be always in fashion's demand. Last year (1907) their export value from Cape Colony reached nearly £2,000,000 (£1,819,606). This, combined with the smaller quantity of feathers produced in other countries, will represent approximately the enormous sum of £5,000,000 per annum paid to the retailers of Ostrich feathers, when the latter have been finished and manufactured ready for wear. At present very high prices are given to the farmer for superior feathers, and even the poorer

classes are remunerative, though much less so than formerly; as a consequence all progressive farmers are rapidly weeding out their inferior birds.

The value of a feather is technically determined by a number of "points," which have reference to the length, breadth, density, and compactness of the flue; the shape, especially as regards the tip, butts, and sides of the feather; the strength, quality, and lustre of the flue; narrowness and strength of shaft; and freedom from barring defects.

### *Plumages of the Ostrich.*

By the plumage of the Ostrich is understood the entire covering of feathers at any one time. This is not the same at all periods, for the bird varies greatly in appearance between its chick and adult condition. Four well-marked plumages can be distinguished, namely, *natal*, *chick*, *juvenal*, and *adult*, but the passage from one to another is only gradual, there being no well-defined moulting period in the Ostrich. Until the adult stage is reached there is an intermingling of the feathers belonging to different stages. The slight seasonal changes in South Africa have but little influence on the feathers, and when the adult is reached there is no difference in the appearance between the summer and winter plumage. A detailed description was given of the different plumages of the Ostrich, it being emphasised that both sexes are practically alike as far as the juvenal stage, and that afterwards the hen retains the drab body-feathers throughout its life, while the cock goes a stage beyond, and its drab feathers are replaced by black.

An interesting point has revealed itself in connection with the plumage changes. It is found that a new feather appearing from a socket from which an immature feather had previously been plucked assumes the character which the plumage has reached at that particular time, independently of the sequence from the particular feather socket. Also, a feather does not change its character during the course of its development, though other feathers appearing while it is in process of growth may be wholly different.

*Clipping and Quilling Feathers.*

The operation of taking the feathers from the Ostrich is carried out at such a time as will ensure the plumes being at their highest perfection, and in such a manner as to inflict little or no injury on the bird. The process of clipping is altogether harmless, and signifies no more than the cutting of one's hair or the trimming of the nails. All these are epidermal productions, and are devoid of nerves and blood-vessels. It is these facts which completely justify the removal of the Ostrich's feathers as a humane act, in marked contrast to the reckless shooting of many other birds, the feathers of which are used for decorative purposes. No objections on humane grounds have ever been made to the Ostrich industry, nor can reasonably be advanced by anyone acquainted with the methods employed. In the "Importation of Plumage Prohibition Bill," recently introduced in the British House of Lords by Lord Avebury, and "destined to check the wanton and wholesale destruction of birds which is being carried on everywhere throughout the British Empire, and in all parts of the world, without regard to the agricultural, educational, and æsthetic value of birds," Ostriches rightly receive special exemption.

A biological fact has been established which is of the greatest value in Ostrich management, namely, that the removal of a quill, whether ripe or unripe, at once stimulates the germ below to activity, and the new feather begins to appear, quite irrespective of any natural time of moulting. The feather germ would not become active were the quill left in position, but does so when the quill is drawn. Thus, by artificially removing all the old quills, when ripe or nearly ripe, a complete new crop of feathers is secured, all of which come to ripeness at about the same time. It is this fact which renders the farming of Ostriches much more satisfactory than would be the case if the feather growth were dependent upon the irregularities of natural moulting.

Both an eight- and a twelve-month system of quilling are followed, dependent largely upon climatic conditions and the

supply of food, but it would appear that the continuous practice of the eight-month system in time results in the deterioration of the feather, whereas this does not follow from the yearly system.

### *Natural Time for Quilling.*

The time of the year at which to quill the Ostrich is a matter of much concern to the farmer, for it may determine whether the succeeding crop of feathers will be the best the bird is capable of producing or one greatly inferior in value. The nutritive condition of the bird at the time of quilling has great influence upon the quality of the next crop of feathers, and, where possible, the bird should be quilled only when in a highly nourished state.

To a certain extent the feathers of a bird bear a relation to its sexual condition. Among all birds it is found that the plumage is at its highest degree of development at the commencement of the mating season. The feathers of gaudily coloured birds are the most perfect at this time, and moulting in nature takes place at such a period as will enable the new feathers to reach their highest perfection with the advent of the mating season. The mating season for the Ostrich, in most districts of Cape Colony, commences in the months of April, May, and June. If, therefore, the time for quilling can be so arranged that the new crop of feathers will come to ripeness during these mating months, the farmer can reasonably expect that the plumes will be the best the bird can produce.

### *Special Object of Investigations.*

Special investigations have been undertaken with the object of determining the cause of and a remedy for the defects in Ostrich feathers technically known as "bars." These are imperfections in the formation of the feather across any part of its length, and observation shows they are due to a lack of proper development and separation of the parts making up the feather. Bars vary greatly in number in different plumes, and though sometimes scarcely noticeable,

are at other times so pronounced as to constitute a very serious defect in the feather. Where at all conspicuous, their presence results in a great depreciation in the value of the plume. Indeed, it has been estimated that in South Africa the annual losses to the farmer from the production of these defects amounts to as much as £25,000.

When the investigations were first undertaken, numerous explanations were prevalent as to the cause of the bars. Almost every Ostrich farmer had his special theory, but scarcely any two were found to agree. A few preliminary experiments were sufficient to show the fallacy of many of the current theories, and no one now believes that the parasites of the bird are the direct cause of the defects, nor yet the practice of quilling, the preening of the feathers, not even in-breeding. It has been shown that similar barring defects may occur in the feathers of all birds, and this fact alone would lead one to suspect the cause to be a very general one, something inherent in the actual formation of all feathers, not a process peculiar to the Ostrich.

The bar is formed at an early stage in the growth of the feather, even while the part of the feather is still within the socket. Sometimes it can be seen that a bar corresponds with each day's feather growth, and this fact also throws considerable light upon the problem. But what the farmer wishes to know is under what conditions the defects will, or will not, be produced ; and it is towards the determining of these practical conditions that the experiments are being directed. In one notable experiment it was shown that exposure of a bird to two days' inclement weather, while its feathers were at an early stage of their formation, sufficed to produce a very conspicuous bar on every growing feather. Such instances are, however, probably rare, and many other causes are at work. It is almost invariably found that a bird in a weak condition of health will have its plumes grown during the period freely barred, and similar results often follow when a bird is subjected to a change of conditions. Anything, in fact, which interferes with the regular normal activity of the animal may reveal itself by feather

defects. The problem, therefore, has resolved itself as follows :—First, what are the conditions under which the bars are produced? Second, by what treatment can they be eliminated? The investigation of these two questions has called for a complete study of the management of the Ostrich. While the inquiry at first seemed very restricted, it is now found to involve almost every phase of Ostrich treatment, and in the course of the investigations a large number of problems have arisen for solution. Study of these is at present in progress, and it is claimed that a good deal of definite information is being gained upon many uncertain and obscure points in the bionomics of the Ostrich.

### *Improvement of the Ostrich by Breeding.*

At an early stage in the domestication of an animal the question arises whether any improvement can be made in its qualities. The characteristics with which nature endows a creature may be good, but we soon desire to improve upon them, or adapt them more fully to our needs. Fortunately, within the last few years science has thrown a good deal of light upon the processes by which animals are and can be modified, and breeders now proceed with greater knowledge and assurance of results than ever before. Permanent improvement in any stock is only possible through mating; any advancement achieved in the individual's life-time dies with it. It implies the selection for breeding purposes of those individuals having the most desirable qualities, or which by their union will give rise to such in their offspring.

At first sight there might seem to be no important differences among Ostriches which would supply material for selective breeding, but a short experience reveals great contrasts; and in the feathers from almost any two birds an expert can see marked differences in the many points according to which a feather is judged, just as one can among the many qualities of a horse, ox, sheep, or dog. The differences are such that various strains of plumes are now well recognized, depending upon such qualities as length, breadth, density, shapeliness, and lustre, and it is with these,

small in themselves, but very important commercially, that the Ostrich breeder has to work.

At the present time much attention is being given to the breeding of superior Ostriches, as practically all Ostrich farmers are also Ostrich breeders. High prices, often amounting to several hundred pounds, are given for the best birds to be used for breeding purposes. But the principles underlying these selections are not always clearly understood. The general aim and object seems to be to secure all the best feather characteristics combined in a single bird, and pairs of birds most nearly possessing these are mated in the expectation of getting the desired combination in the progeny. It must be confessed there are yet many disappointments among breeders. Occasionally it will be found that the offspring from two superior birds produce quite inferior feathers, and in other cases only a small proportion of the chicks reared in one season turn out really first-class birds. Even the best breeders can scarcely guarantee that the chicks from superior parents will themselves be superior. Anxious to retain their reputation, some farmers will not dispose of their chicks, the risk of failures among them being too great. They prefer to keep them until the juvenal, or even adult, feathers are formed, when their character is clearly proved, and, if superior, they then command good prices.

There is no question that the average standard of the Ostrich as a feather-producing animal is being rapidly raised as a result of the attention now given to breeding. A greater number of superior feathers are now being produced than at any previous time. But the intelligent farmer would like to be assured that the actual feather capability of the bird can also be increased—that is, that the domesticated Ostrich can be made to produce a better feather than hitherto.

At the present stage of Ostrich breeding, two very clearly defined problems call for solution:—(1) To gain the assurance that the progeny will be the equal of the parents, that is, that the parents will breed true; (2) to improve, if possible, the progeny beyond the standard of their parents. The utmost that can yet be done is to outline some of the



principles of breeding in which these problems are included, leaving it for the farmer to make such application of them as he sees fit. Three methods of breeding are known, all of which need to be considered : (1) Selective breeding ; (2) Cross breeding ; and (3) Hybridization ; and a fourth means of improvement is also recognised, namely, Mutation.

*Competition with other Countries.*

Connections have been established with Ostrich breeders in practically all parts of the world, including Northern Africa, Southern Europe, California, Arizona, Florida, Cuba, South America, Australia, and New Zealand. In all these places efforts, with varying success, are being made to build up an Ostrich industry, and in time the feathers might become serious competitors with those in Cape Colony. It is very desirable, if South Africa is to maintain its present supremacy in the Ostrich-feather trade, that we should know exactly what is being done in other countries. The Act recently passed prohibiting the exportation of Ostriches and Ostrich eggs was mainly designed to prevent the best birds from leaving the Colony, and the success of the policy which the Act represents depends upon the ability of South Africa to continue to produce better feathers than can be grown elsewhere. It must be allowed that, in the quality of its feathers, South Africa is at present many years ahead of other countries, but though the bird is indigenous to Africa, it does not follow that it may not succeed as well elsewhere.

The feathers obtained from New Zealand are greatly inferior to those produced in Cape Colony. Samples from America show considerable advance upon those from New Zealand, but compared with those of the Cape are lacking in size, strength of flue, and density. Both lots show evidence of having been grown under highly artificial conditions, and it may reasonably be doubted whether in the absence of proper veld, with its variety of bush and shrubs, other countries will ever produce such superior feathers as those grown in South Africa. Nevertheless, the thousands of birds now farmed in America, where the climate seems very favourable

and lucerne grows freely, render it necessary that Cape Colony should put forth every endeavour to foster the Ostrich to its utmost.

*An Experimental Farm.*

The great need at present in South Africa is the establishment of an experimental Ostrich farm on a permanent basis, where investigations can be carried out as to the best management of birds so as to produce the finest type of feathers, the best methods of rearing and managing chicks, and also to determine the best remedies against the many diseases and parasites to which the bird is subject. Particularly is it necessary that experiments in breeding superior birds should be conducted under proper conditions, so that the progeny can be distributed among the farmers, and thereby gradually raise the standard. It is unquestionably by the various methods of breeding that the greatest improvement in Ostriches will be made in the future, and many of these are of such a nature as can scarcely be undertaken by the private farmer. The Ostrich-feather industry is of such vast importance to Cape Colony, practically equalling that of the wool industry, that every assistance which science and practice can afford should be given to its maintenance and further development.

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III.—*A Note on the Black-faced Love-Bird* (*Agapornis nigrigenis*, W. L. Sclater). By ALWIN HAAGNER, F.Z.S., Assistant, Tvl. Museum.

(Plate I.)

IN view of Mr. Reginald Phillipps's article on the above bird in the May, 1908, number of the 'Avicultural Magazine,' and of the fact that the Transvaal Museum possesses a series of 23 skins, while the Zoological Gardens contain seven living examples, a few remarks and the accompanying coloured figure may be welcome.\*

\* [This plate went to press many months before the No. of the Avic. Mag. with coloured plate appeared.—EDD.]



C G Davies del  
H Grönvold lith

Gale & Pencil-Monks, 1895

HELIOSPIZA NOOMIAE & AGAFORNIS NIGRIGENIS



The Museum collection contains the following series :—

2 ♂ ♂, and 1 sex not given, from German S.W. Africa.  
29.8.06.

1 ♀ from North-western Rhodesia. 4.7.06.

2 unsexed from North-western Rhodesia. Sept. 1907.

7 ♀ ♀       "               "               "               "

10 ♂ ♂       "               "               "               "

*Coloration.*—In the article above-mentioned Mr. Reginald Philipps describes three living birds which he purchased in England, a ♂, a ♀, and an immature ♂. I agree in the main with his remarks on the coloration of the adult bird, but would supplement them by the following :—

Fully adult birds have the forehead and crown for a breadth of quite 15 mm. sienna-brown; hinder crown and nape olive-green with a yellowish tinge, this colour extending down the sides of the neck and meeting the salmon-pink of the lower throat and upper breast; this latter is paler in some specimens, of a bright salmon-pink in others, extending in a point on to the middle of the upper breast, the shafts of the feathers being dark brown. Cheeks and upper throat dusky brown (almost black on the chin), fading into paler (sienna) brown on the edges below the cheeks and on the ear-coverts. Under surface bright pale green washed with yellowish, this wash being more conspicuous on the sides of the body and flanks. The centre tail-feathers are shaded with dusky towards the tip, forming a broad ill-defined bar; the remaining tail-feathers have a conspicuous subterminal black bar about 7 mm. in breadth, which, however, does not extend to the outer web of the outer tail-feathers, but there appears as a mere dusky band extending in a streak for some distance up the web. There is no difference apparent in the coloration of the sexes, the slight variations in shades being present in both sexes.

In some specimens (immature presumably) the back is washed with drabish-brown and the under surface with pale blue-green. The salmon-pink of the breast is very pale, even ill-defined in some examples.

The following are the measurements in the flesh taken by Mr. C. Wilde, the collector :—

♂ : l. 147–150 mm. ; wing 90–95 mm. ; tail 47–55 mm.

♀ : l. 150–154 mm. ; wing 93–95 mm. ; tail 52–55 mm.

Imm. : l. 140–142 mm. ; wing 90–91 mm. ; tail 50–53 mm.

[Soft parts : “ Iris brown ; eyelids white ; nose white ; feet grey ; bill red, near nose white.”—C. W.]

The skin-measurements of some specimens not measured in the flesh are :—

♂ ♂ : w. 94–96 mm. : tail 47–48 mm. ; tarsus 10 mm. ; middle toe with claw 20 mm. ; bill 15 mm.

♀ ♀ : w. 94 mm. ; tail 43 mm. ; bill 14·5 mm.

*Habitat.*—The majority of these specimens were collected in the Barotse Country, north of the Zambesi, but three are from the Caprivi-corner of German South-west Africa, between the Chobi and Zambesi Rivers, which brings the species well within the geographical boundary of South Africa.

*Habits.*—Mr. Wilde informs me that he has seen these birds in large flocks, and that they live chiefly on seeds and berries (in season).

The birds in the Gardens here are in a very healthy condition and live on bird-seed, soaked bread, pumpkin-pips, and sunflower-seeds. They climb like parrots and are fond of gnawing at the branches of their tree-perches. They may also often be seen billing one another. The cry is a shrill grating chirrup.

[Since writing the above I have received the October number of the ‘Avicultural Magazine,’ containing a coloured plate of this species, and notes by Messrs. Astley and Phillipps. Amongst other details Mr. Astley tries to show a difference between the two sexes. In a series of nearly 1000 of these birds, just brought down from Rhodesia, I can find *no* sexual differences whatever, and of the 1000 only about 2 % have light-coloured irides.]

EXPLANATION OF PLATE I.

Fig. 1. *Heliospiza noomeæ*, Gunning.\*

2. *Agapornis nigrigenis*, W. L. Slater.

IV.—*Observations on Migratory Birds at Komatipoort.* By Major J. STEVENSON HAMILTON, Supt. Sabi Game Reserves.

DURING February, 1908, large numbers of Hobbies were reported in the country between the Letaba and Limpopo; they were hawking the flying ants. The ranger shot one to make sure, but did not report whether they were *Falco subbuteo* or *curieri*; they only remained about a week, and the same ranger says he never before saw any in the three years he had been in that locality.

The same informant reports that large numbers of Storks, both *abdimii* and *alba*, were seen during the same month.

I myself saw large numbers of the latter collecting on the Lebombo, close to the Komati River, on February 15th. As previous to that date I had repeatedly seen them during the summer, and as since that date I have seen none, nor can hear of any others having been observed, I am of the opinion that they left very soon after 15th February. From the 2nd until the 20th February moderately strong S.E. winds blew. This agrees with Major Fraser's observations above mentioned, as he records that the birds were coming in fast about the middle of February.

I saw two Saddle-Bills (*E. senegalensis*) on the Sabi on March 14, and Major Fraser saw two on the Itendi (a tributary of the Letaba) on 28th February.

*Merops nubicoides* (Carmine-throated Bee-eater).—These birds were seen by me in pairs throughout the summer on the Sabi.

The last time I saw any was on, I think, February 10th, or possibly a few days earlier. I noticed them first in the early part of November.

\* See 'Journal S. A. O. U.' vol. iii. No. 2 (December 1907).

*Coracias garrulus*.—The European Roller was here in very large numbers during the months of November, December, and January; one I kept in captivity for a few days became very tame. From the beginning of February the numbers steadily decreased. On the 10th March, not having seen any for some time, I went carefully through their usual haunts, and in the course of the day only observed one; since that date I have not seen any.

*C. caudatus* is apparently resident here. During the summer *garrulus* far exceeded in numbers any of the other species. South-easterly winds have predominated since January up to the end of April. *Garrulus* was generally to be seen in large numbers wherever there were young locusts or grasshoppers; I never saw them in pairs, but always either collected in numbers or as single birds.

*Swallows*.—A pair of *Hirundo puella* built a nest and brought out their young under the shelter of my verandah. They began to build early in October, and the young ones left the nest on 20th February. As soon as they had done so the birds disappeared, and I did not observe them again. On April 14th during a heavy rainstorm, 15 birds, which I judged from their size to be *H. cucullata* and not *puella*, perched on a small bare tree with their backs to the rain, and stayed so throughout the downfall. Their conduct was in striking contrast to that of *H. rustica* and *H. albigularis*, which were fluttering about and seeking shelter under the eaves of the roof, and even inside the house. I have not seen *H. cucullata* nor *H. puella* since that date.

*H. rustica* were here throughout the summer. Every evening I used to see about fifty hawking insects or perched together with *albigularis* and *dimidiata* on the telegraph-wires.

On my return from a short absence upon March 5th, the wind having meantime been S.E., I saw no Swallows at all for a few days. About the 12th there suddenly appeared a very large concourse of *H. rustica*, and for more than a week several hundred birds were to be seen every evening. These again disappeared during some wet and windy weather, and



about the beginning of April there reappeared about 100 birds. I am inclined to think that these all represent different migrations—for one reason, that the permanent summer residents always perched on the same stretch of telegraph-wire ; while the birds that came later favoured a different place, and after each successive reappearance were seen to take up different quarters.

On the 14th April we had heavy rain and wind, and large numbers of *H. rustica* were driven indoors ; many were injured, and so I had no difficulty in clearly identifying them. During the next few days the weather continued rather stormy and several were killed by cats, so that up to April 20th I had plenty of chances of inspecting dead birds. After this till the end of the month the Swallows, I am practically certain *H. rustica* and *H. albigularis*, continued to hawk insects every evening round the cattle kraals, just as the two species had done all the summer. The numbers seemed to become gradually less ; on May 5th I noticed about ten birds, but on the 6th there were none, nor have I seen any sign of them since in their accustomed haunts. Very light north-easterly breezes prevailed at the time, and there was a marked fall in the night temperature.

On the 8th I saw some Swallows hawking flies over the river and bathing at sunset ; these appeared like *H. albigularis*, but on shooting one I found that it was *H. smithii*. They were acting quite differently from the Swallows I had been hitherto observing, however, and it was at some distance from the place frequented by them.

On the whole I am pretty sure that the last of the northern Swallows did not leave here till the beginning of May, though the exodus began perhaps two months earlier.

*Milvus ægyptius* arrived about the beginning of November, was in great numbers throughout December and January, when the afterbirths of the calving game seemed to attract them, and disappeared somewhere about the end of February (they had been increasing in numbers throughout the latter month). From the 1st of March onwards I saw no more

of them nor of any of the genus *Buteo*, of which *desertorum*, and I think *jakal*, were present in the hot months.

On the 29th of April at 8.30 A.M., and about 14 miles north of the Crocodile River and Delagoa Bay Railway, I saw what may have been a migration. A long line of birds (about 60) was flying steadily northwards at a height of at least 600 feet from the ground—possibly more, as it carried them well over the tops of the hills. The distance was unfortunately too great for me to identify them even with glasses, but they were certainly large birds of the Stork type. A group of birds flew at the head and a single file streamed out behind. The wind was blowing steadily from the south. They came over the tops of the hills some two miles to my front, and I watched them out of sight northwards.

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#### V.—*Pyromelana oryx* and its Nesting Parasites.

By the Rev. NOEL ROBERTS.

THE following notes may interest readers of the 'Journal.'

On Dec. 9th of last year I visited a large colony of nests of *Pyromelana oryx* about fifteen miles north of Pretoria.

Having noticed several Golden Cuckoos (*C. cupreus*) on a willow tree overhanging part of the colony, I examined every nest, hoping to find a clutch containing a Cuckoo's egg. The search revealed several nests occupied by young birds of this species, one of which was almost fully fledged, and I was amply rewarded by finding four clutches each containing a Cuckoo's egg. These specimens differ from any I have seen before in that they are of an uniform verditer-blue, like the eggs of the host, from which they could be distinguished by their greater size. This disparity in size did not quite convince me at first, as I have on several occasions found diminutive specimens in otherwise normal clutches of *P. oryx* and other birds. In this case, however, the proof of the egg lay in the blowing, and the application of this test produced incontrovertible evidence as to the correctness of my surmise,

for two of the eggs had far advanced in incubation and contained well-developed zygodaetylous embryos.

But the "blowing" did not only "prove" the eggs of the Cuckoo : it tended to throw a little more light on the breeding-habits of *Quelea quelea*.

Scores of these birds were flying about and resting on the reeds in the colony, and I picked up a dead male beneath one of the nests. A large number of asparagus and other bushes, besides a small plantation of Spanish reeds in the neighbourhood, were literally covered with masses of their nest-work. On this, as on many previous occasions, I examined several of these so-called courting-nests, but I have never found one lined, or giving any indication that they are used for breeding purposes.

Knowing this, and arguing from the analogy of another Finch (*Vidua principalis* : vide 'Journal,' vol. iii. No. 1), it is not difficult to suppose that *Q. quelea* is parasitic in its breeding-habits ; and *P. oryx* suggests itself as the most probable host.

These convictions were greatly strengthened by the discovery that in a clutch of four eggs from the nest of a *P. oryx* (including one of the specimens of *C. cupreus* above referred to), *only two* of the smaller eggs were hard set : the remaining one being *quite fresh*. This specimen differs very slightly in size, shape, and shade of colour from the others, and I believe it to be an egg of *Q. quelea*.

I had hoped to secure a final proof in the shape of fledglings from the nests, but my efforts were frustrated by the ruthless depredations of some other member of the genus *Homo*.

Taken in connection with their great numbers, and the fact that where they occur in the same locality *P. oryx* and *Q. quelea* are often found feeding together and frequenting the same roosting-places, the above evidence taken cumulatively, if not sufficient to establish the fact beyond doubt, is at least sufficient to warrant the assumption *that Quelea quelea is parasitic in its nesting-habits, and that Pyromelana oryx is sometimes, if not always, the host.*

NOTE.—The measurements of the last-named clutch are as follows :—

*P. oryx*  $20.5 \times 15.0$  mm. ; *C. cupreus*  $24.5 \times 15.5$  mm. ;  
*Q. quelea*  $18 \times 14$  mm.

I also discovered a clutch of *spotted* specimens of *P. oryx*. Has this variety been recorded before ? I have only observed two other instances, one of which occurs in my own collection, and the other is now, I believe, in the beautiful collection of the Transvaal Museum. The spots are very minute, but unmistakable.

The Cathedral Precincts, Pretoria.

April 2, 1908.

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VI.—*A List of, and Notes on, Birds collected and observed in the District of Beira, Portuguese S.E. Africa.* By  
P. A. SHEPPARD.

WITH the exception of a very few species, the following birds were collected by me in the Beira territory. The District is extremely flat, consisting of open grass plains. A belt of higher ground is reached about four miles inland, which in places is thickly wooded ; in others the woods are more open, with two or three small streams flowing down on to the flats. The highest elevation collected over is about 165 feet above sea-level. The area over which the birds were collected, with the exception of a few, is not much more than 36 square miles. The list is by no means complete, there being a number of Warblers, Wrens, and other small birds, also a few water-birds, which I have noticed, but not yet collected or identified.

The nomenclature followed is that of Sclater and Stark's "Birds" ('Fauna of South Africa Series').

I have to thank Prof. Reichenow, of the Berlin Museum, and Mr. A. K. Haagner, of the Transvaal Museum, for identifying many doubtful species.

1. *CORVUS SCAPULATUS*, Daud. Pied Crow.

Very common, and sometimes seen in flocks of 30 to 40 frequenting the sand-banks in front of the town.

I found a nest in January 1905 built in the top of a "Bottle Palm" tree, about 60 feet from the ground, but was unable to get the eggs.

2. *DILOPHUS CARUNCULATUS* (Gm.). Wattled Starling.

Uncommon here, occurring only singly or in pairs during the hot months.

3. *LAMPROCOLIUS PHENICOPTERUS BISPECULATUS* (Strickl.). Red-shouldered Glossy Starling.

Uncommon, visiting us during the colder season in small flocks of 6 or 7.

4. *LAMPROCOLIUS MELANOGASTER* (Sw.). Black-bellied Glossy Starling.

The commonest Starling, arriving here about November.

I have found its nests in hollow trunks of the mangrove trees ; eggs pale bluish-green without spots.

5. *CINNYRICINCLUS VERREAUXI* ([Boc.] Finsch & Hartl.). Plum-coloured Glossy Starling.

A very common summer visitor, arriving here in Sept. ; earliest date observed Sept. 22. It lays, in holes in old trees, from two to four eggs.

6. *ORIOIUS LARVATUS*, Licht. Black-headed Oriole.

Very common.

7. *HYPHANTORNIS NIGRICEPS*, Lay. Black-headed Weaver Bird.

Uncommon.

8. *SITAGRA OCULARIA* (Sm.). Smith's Weaver Bird.

Very common.

9. *SYCOBROTUS BICOLOR* (Vieill.). Black-backed Weaver Bird.

Very plentiful in wooded districts. It is generally seen in pairs, and is very partial to suspending its nest from the telegraph-wires along the railway-line.

10. *AMBLYOSPIZA ALBIFRONS* (Vig.). Thick-billed Weaver Bird.

I have only seen and shot one female.

11. *PYTELEA MELBA* (L.). Southern Red-faced Finch.  
Common.

12. *LAGONOSTICTA NIVEOGUTTATA* (Ptrs.). Peters's Ruddy Finch.

Common, usually in pairs.

13. *LAGONOSTICTA JAMESONI*, Shell. Jameson's Ruddy Waxbill.

Scarce.

14. *ESTRILDA ASTRILDA* (L.). Common Waxbill.  
Extremely common everywhere.

15. *ESTRILDA INCANA*, Sund. S.A. Grey Waxbill.  
Scarce.

16. *SPERMESTES FRINGILLOIDES* (Lafr.). Pied Weaver-Finch.

A very common Finch all over the district; it builds a dome-shaped nest, often in colonies, laying from five to nine eggs, pure white in colour.

17. *SPERMESTES SCUTATUS* (Heugl.). Hooded Weaver-Finch.

Common; found in small flocks.

18. *SPERMESTES NIGRICEPS*, Cass. Rufous-backed Weaver-Finch.

Usually seen in pairs, but I have sometimes seen as many as ten or a dozen together, consorting with the Common Waxbill.

19. *QUELEA QUELEA* (L.). Red-billed Weaver.  
Common, in small flocks.

20. *QUELEA ERYTHROPS* (Hartl.). Red-headed Quelea.  
Scarce.

21. *PYROMELANA ORYX* (L.). Red Bishop Bird.  
Not particularly common.

22. *PYROMELANA CAPENSIS APPROXIMANS* (Cab.). Black-and-Yellow Bishop Bird.

Very common.

23. *UROBRACHYA AXILLARIS* (Sm.). Red-shouldered Widow Bird.

Very common on the flats.

24. *VIDUA PRINCIPALIS* (L.). Pin-tailed Widow Bird.

Very common.

25. *VIDUA PARADISEA* (L.). Paradise Widow Bird.

Quite uncommon in this locality.

26. *PETRONIA PETRONELLA* (Leht.). Diamond Sparrow.

Fairly plentiful here during the hot months.

27. *SERINUS ICTERUS* (Bonn.). Eastern Yellow Seed-eater.

Very common, usually seen in parties of 6 to 10.

28. *EMBERIZA FLAVIVENTRIS* (Vieill.). Golden-breasted Bunting.

Not uncommon here from May to July, usually found in twos or threes.

29. *FRINGILLARIA TAHAPISI* (Sm.). Rock Bunting.

A pair (♂ and ♀) were procured on the railway-line about 23 miles inland, at M'Zimbiti. The male had a large black ant in its bill.

30. *CALENDULA CRASSIROSTRIS* (Vieill.). Thick-billed Lark.

Very uncommon; have only seen a few specimens here.

31. *MIRAFRA NIGRICANS* (Sundev.). Dusky Lark.

Not common. One specimen obtained.

32. *ANTHUS NICHOLSONI*, Sharpe. Nicholson's Pipit.

33. *ANTHUS RUFULUS*, Vieill. Cinnamon Pipit.

Both these Pipits were fairly common.

34. *MACRONYX CROCEUS*, Vieill. Yellow-throated Long-claw.

One of the commonest birds in the district.

35. *MOTACILLA CAPENSIS* (L.). Cape Wagtail.  
Common.

36. *CINNYRIS MICRORHYNCHUS*, Shelley. Little Bifasciated Sunbird.

Very uncommon close to Beira, but much more plentiful at M'Zimbiti, 23 miles inland.

37. *CINNYRIS GUTTURALIS* (L.). Scarlet-chested Sunbird.

Very plentiful near Beira. I have seen quite a number on a small plantation of Ceara rubber-trees when in blossom; they are also very partial to bananas when flowering.

38. *CINNYRIS KIRKI*, Shell. Kirk's Sunbird.

Very plentiful here, and often seen frequenting the same trees as the previous species.

39. *CINNYRIS VERREAUXI*, Sm. Mouse-coloured Sunbird.

Scarce in the district; I shot one male on the top of a mangrove-tree on the sea-coast, the only specimen I have seen.

40. *CINNYRIS OLIVACINA* (Ptrs.). Olive-coloured Sunbird.  
Very uncommon in this district.

41. *ANTHREPTES COLLARIS* (Vieill.). Little Collared Sunbird.

Fairly common.

42. *ANTHREPTES REICHENOWI*, Gunning. Blue-throated Sunbird.

(Annals Trl. Museum, Jan. 1909.)

♂. M'Zimbiti, near Beira, 17. 5. 08.

♀.       "                       "           6. 7. 08.

43. *PARUS NIGER*, Bonn. & Vieill. Black Tit.  
Common among woods.

44. *LANIUS COLLARIS*, L. Fiscal Shrike.  
Very common.

45. *LANIUS MINOR*, Gm. Lesser Grey Shrike.

I procured a male on the 29th March, 1908, on newly cleared ground. I saw another a few days later at the same



place ; these birds were evidently migrating, as I have seen no others since. Both these birds were continually settling on some stump or branch of a dead tree in open patches of newly cleared ground, and were anything but timid, coming close up to the kaffirs who were hoeing the ground and apparently picking up insects.

46. *LANIUS COLLURIO*, L. Red-backed Shrike.

Not common. I procured a young bird in December 1906.

47. *NILAUS NIGRITEMPORALIS*, Rehw. Black-browed Brubru Shrike.

Common.

48. *DRYOSCOPUS CUBLA* (Shaw). Puff-back Shrike.

Very common.

49. *DRYOSCOPUS FERRUGINEUS* (Sund.). Large Puff-back.

Not common.

50. *LANIARIUS SULPHUREIPECTUS* (Less.). Orange-breasted Bush-Shrike.

I have so far only seen one specimen, a male, which I shot in thick bush.

51. *LANIARIUS STARKI* (W. L. Sclater). Southern Grey-headed Bush-Shrike.

Common.

52. *NICATOR GULARIS*, Finsch & Hartl. Zambesi Green Shrike.

Not uncommon in inland wooded localities, and plentiful in low bush near the sea. This is rather a shy bird, but it frequently emerges into the open to feed amongst low ground-plants. It has a few very loud and not unpleasant notes.

53. *SIGMODUS TRICOLOR* (Gray). Zambesi Helmet Shrike.

Found in wooded districts, but, so far as my observations go, does not enter the densest bush, but prefers open spaces, where it is usually found in companies of from 3-5; I have never seen more than five together at one time. It seems to prefer the larger trees, and flies no distance when disturbed, but usually makes to a tree close by : its flight is

rather heavy ; it is a much more wary bird than *P. talacoma* and not so noisy. I do not think it is a resident here, but on this point am not quite certain. Have only noticed this bird here during the hot months : October to March.

54. SIGMODUS SCOPIFRONS, Ptrs. Chestnut-crowned Helmet Shrike.

On the evening of May 3rd I saw a flock of eight birds, which I took to be *S. retzii*, on a large tree quite near the house, out of which I shot five, but on picking up the bodies I found them to be a species quite new to me, although I had seen one other before, shot by C. H. B. Grant in this district. The first bird I brought down was only wounded, and its crying brought all the others to it. As they flew round and settled on low dead branches they kept up a constant chattering, in this resembling the next species.

Its habits are very similar to *retzii* ; it keeps to the higher trees, and with a very feeble flight travels from one to another. I have only seen this species in thickly wooded districts. I found small insects in the stomachs of those shot. It appears to be a migrant, as I have not seen one for at least two months.

Feet and bill red, tip of bill orange-yellow.

55. PRIONOPS TALACOMA (Sm.). Smith's Helmet Shrike.

Found throughout the district, among low bush and forests, in flocks varying from 5 or 6 to 12 or 15. It is a very noisy bird and has a heavy flight. It is not very shy and only flies for short distances, from tree to tree. If a bird happens to be only wounded when shot, its crying attracts the attention of the rest of the flock, which at once come down to it, and continue hopping and flying round it, keeping up a continuous chatter. When picking up a wounded bird, I have had them flying so close that it would have been an easy matter to have knocked them down with a stick ; they do not attack the wounded bird in any way, but after a minute or so leave it to its fate. These birds are very restless, being continuously on the move. Their food consists

chiefly of insects, which I have seen them, on one or two occasions, catch on the wing, but usually these are picked from the leaves and branches of trees and sometimes off the ground.

56. *CRATEROPUS JARDINII*, Sm. Jardine's Babbler.

Uncommon visitor to these parts. I have only once shot this bird, procuring three out of about six or seven, but have seen them occasionally since; they appear to like thick cane-patches.

57. *CRATEROPUS HARTLAUBI*, Boc. Hartlaub's Babbler.  
Not uncommon, in thick bush land.

58. *PYCNONOTUS LAYARDI*, Gurn. Black-capped Bulbul.  
Undoubtedly our commonest bird. Nests in low bushes; I also found a nest built in a bunch of bananas, containing two eggs, both with birds inside.

59. *ANDROPADUS IMPORTUNUS* (Vieill.). Sombre Bulbul.  
A very common species.

60. *ANDROPADUS DEBILIS* (W. L. Schl.). Slender Bulbul.  
*a.* M'Zimbiti, near Beira, 17. 5. 08. (Iris pale yellow.)

61. *PHYLLOSTROPHUS CAPENSIS*, Swains. Cape Bristle-necked Bulbul.  
Very scarce.

62. *PARISOMA LAYARDI*, Hartl. Layard's Tit-Babbler.  
Very uncommon.

63. *PHYLLOSCOPUS TROCHILUS* (L.). Willow Wren.  
Not uncommon during hot season.

64. *HYPOLAIS ICTERINA* (Vieill.). Icterine Warbler.  
Not uncommon during hot season.

65. *ACROCEPHALUS PALUSTRIS* (Bechst.).  
♂. Beira, 26. 12. 06.

66. *EREMOMELA SCOTOPS*, Sund.  
*a.* Beira, 15. 7. 08.

67. CAMAROPTERA SUNDEVALLI, Sharpe. Grey-backed Bush Warbler.

I shot a male in thick bush on the 15.13.07. It is not common here and keeps, as a rule, to the upper branches of the trees ; it can always be located by the peculiar note it utters when searching for insects.

68. CAMAROPTERA GRISEOVIRIDIS (v. Müll.). Green-grey Bush Warbler.

*a.* Beira, 13.3.06.

69. SYLVIAETTA WHYTEI (Shell.). Whyte's Crombec.

Fairly common in the woods. This is a new record for South Africa.

70. APALIS NEGLECTA (Alex.). Black-breasted Bush Warbler.

♂ . Beira, 24.6.07.

♀ . Beira, 28.1.06.

71. PRINIA MYSTACEA, Rüpp. Tawny-flanked Wren Warbler.

Common.

72. CISTICOLA STRANGEI (Fras.). Grey-headed Grass Warbler.

♂ . Beira, 26.12.06.

73. CISTICOLA NATALENSIS (A. Sm.). Natal Grass Warbler.

♀ . Beira, 1.9.07.

74. CISTICOLA LUGUBRIS (Rüpp.). Buff-fronted Grass Warbler.

♂ . Beira, 11.1.06.

75. CISTICOLA RUFA (Fras.). Rufous Grass Warbler.

♀ . Beira, 1.9.07.

76. CISTICOLA CINNAMOMEICEPS, Haagn. Cinnamon-crowned Grass Warbler.

(Annals Tvl. Museum, Jan. 1909.)

*a.* M'Zimbiti, 23 miles inland from Beira, 12.1.08.

77. *TURDUS LIBONIANUS* (Smith). Kurrichaine Thrush.

Very common in woods ; have taken several clutches of eggs from nests built in fork of a tree.

78. *PRATINCOLA TORQUATA* (L.). S.A. Stonechat.

A visitor during the colder months, arriving about April and leaving in September.

79. *SAXICOLA PILEATA* (Gm.). Capped Wheatear.

A fairly common visitor during the colder months and very partial to the short salt grass-flats.

80. *ERYTHROPYGIA LEUCOPHRYS* (Vieill.). White-browed Ground Robin.

Not uncommon among thick bush.

81. *ERYTHROPYGIA QUADRIVIRGATA* (Rehb.). Rufous-breasted Ground Robin.

Appears to be fairly plentiful here in the thick forests, but difficult to obtain on account of its shyness. In a patch of forest-land that has been cleared I find it is very fond of coming out of the dense thickets and feeding among the dead branches of trees that have been cut down, hopping about near to, and on the ground, where it can be fairly easily shot if one keeps quite quiet and waits. According to the stomachs of specimens examined, its food consists entirely of insects and grubs. It has a nice song, although its notes are not very varied ; some are quite powerful and melodious, and can be heard at all times of the day, but particularly at early morning and evening. I know nothing of its nesting-habits so far.

82. *MUSCICAPA GRISOLA*, L. Spotted Flycatcher.

An uncommon summer visitor here.

83. *MUSCICAPA CÆRULESCENS* (Hartl.). Blue-grey Flycatcher.

Very uncommon in thick woods.

84. *SMITHORNIS CAPENSIS* (Sm.). Cape Broadbill.

1 ♂ shot 9. 5. 08.

Found in thick bush.

85. *BIAS MUSICUS* (Vieill.). Black-and-White Flycatcher.

Very scarce ; have only seen one specimen, shot by Mr. C. H. B. Grant while collecting at M'Zimbiti.

86. *PLATYSTIRA PELTATA*, Sund. Green-throated Flycatcher.

Scarce here ; usually found in small companies, in thick bush near water, keeping among the lower branches and undergrowth. It is of shy habits, and rather difficult to shoot. It is very partial to bamboo-thickets, and keeps up a continuous twittering when on the move. I have only once seen this species far away from water, in bush ; it seems to prefer the woods in low-lying, damp ground.

87. *PACHYPRORA MOLITOR* (Hahn & Küst.). White-flanked Flycatcher.

Very common.

88. *PACHYPRORA SHEPPARDI* (Haagn.). Sheppard's Flycatcher.

[*Batis sheppardi*, Annals Tvl. Museum, Jan. 1909.]

♂. M'Zimbiti, near Beira, 27. 5. 08.

♀.           ,,           ,,           3. 5. 08.

89. *BRADORNIS PALLIDUS MURINUS*, Finsch & Hartl. Mouse-coloured Flycatcher.

Fairly common. Two females procured.

90. *SHEPPARDIA GUNNINGI*, Haagn. Orange-breasted Flycatcher.

[Annals Tvl. Museum, Jan. 1909.]

♂. M'Zimbiti, near Beira, 5. 1. 08.

91. *TROCHOCERCUS CYANOMELAS* (Vieill.). Blue-mantled Flycatcher.

Uncommon and only seen in dense bush.

92. *TERPSIPHONE PERSPICILLATA* (Swains.). Paradise Flycatcher.

A common species here, especially on the mangrove-swamps, where it apparently builds, as I have often seen a

family of five or six together, but have never been able to find a nest.

93. *DICRURUS AFER* (Leht.). Fork-tailed Drongo.

Very common.

94. *DICRURUS LUDWIGI* (Sm.). Square-tailed Drongo.

Not quite so plentiful as the previous species.

95. *CAMPOPHAGA NIGRA*, Vieill. Black Cuckoo Shrike.

Not by any means a common bird here.

96. *CAMPOPHAGA HARTLAUBI*, Salvad. Hartlaub's Cuckoo-Shrike.

Have only seen one specimen, shot by Mr. C. H. B. Grant, at M'Zimbiti, 23 miles inland.

97. *GRAUCALUS PECTORALIS*. Black-chested Cuckoo Shrike.

1 ♂ shot 15. 5. 08 on top of a high tree in woods. A young ♂ procured on 14th April, 1906, has the throat white, and upper chest pale grey.

98. *HIRUNDO RUSTICA*, L. European Swallow.

Common.

99. *HIRUNDO GRISEOPYGA*, Sund. Grey-rumped Swallow.

♂. Beira, 15. 6. 08.

A fairly plentiful visitor. Arrived here during June and the last seen was on Sept. 14th.

I found the nest of this bird on Sept. 10th, 1908, built in a hole made on the level surface of the ground. I watched the birds for some time and eventually one settled and did not reappear. On walking to the spot I discovered a hole like that made by a rat, and on digging, found a loose structure of grass and grass-stems, which contained four pure white eggs; feeling in further, I found the female at the end of the hole. The nest was practically flat. I shot the male also at the same time. Size of eggs  $\frac{5}{8}'' \times \frac{7}{16}''$ ; rather pointed and not shiny.

On Sept. 12th I found another nest within a hundred yards of the other: I watched the birds circling round for a

little while, when one settled and remained hidden. I discovered the nesting-hole, identical with the first; the nest contained three almost fully fledged young, of which I kept the skins, and caught the female on the nest as well, but could not get a shot at the male, as he flew away, and although I waited for some time he did not return. Both birds kept up a constant twittering while flying round the nest. Both nests were about 3'-4' deep in the tunnel, which was in a slightly slanting direction.

100. *HIRUNDO PUELLA*, Temm. & Schl. Smaller Stripe-breasted Swallow.

Have only seen this bird, when passing on its way south in October last, at M'Zimbiti, where I procured several specimens flying over a white ant heap, after a shower of rain, in company with *H. rustica*. Have never seen this species near the coast at Beira.

101. *HIRUNDO MONTEIRI*, Hartl. Monteiro's Swallow.  
Fairly common here during the hot months only.

102. *PSALIDOPROCNE ORIENTALIS*, Rehw. Eastern Rough-winged Swallow.

I have seen and shot this Swallow throughout the year, but it is much more plentiful during the hotter months. On several occasions during the last two or three weeks I have watched these birds going through a most peculiar performance. At first I thought they were building, as they were constantly settling on dead tufts of grass, which had become dried after being hoed up; but on watching them further, I noticed they picked up pieces and flew high up, continually circling as they flew, and then dropped the grass, not attempting to recover it; this I saw done on many occasions on different days, not only by one bird, but by many. These birds are resident here throughout the year, and by far our commonest Swallow.

103. *PITTA ANGOLENSIS*, Vieill. Angolan Pitta.

A male brought in to me alive by a native, who said he saw another in the woods running on the ground.



104. *UPUPA AFRICANA*, Bechstn. S.A. Hoopoe.

Fairly common throughout the wooded districts, but very difficult to approach.

105. *IRRISOR VIRIDIS* (A. Leht.). Kakelaar.

Not so common as the previous species and as difficult to approach ; usually seen three or four together.

106. *RHINOPOMASTUS CYANOMELAS* (Vieill.). Scimitar-bill  
Very common in woods.

107. *TACHORNIS PARVA* (Leht.). Palm Swift.

Common everywhere and is seen throughout the year.

108. *CHÆTURA BÖHMI* (Schal.). Böhm's Spine-tail.

A very scarce bird. I have only seen a few flying at M'Zimbiti, where I managed to procure three specimens in November last.

109. *CAPRIMULGUS RUFIGENA*, A. Sm. Rufous-cheeked Nightjar.

Very common round here in dry sandy places, among low scrub.

110. *CAPRIMULGUS FOSSII* [Verr.], Hartl. Mozambique Nightjar.

Very common all over the district.

111. *CORACIAS GARRULUS*, L. European Roller.

A very common bird during the summer months, and it also remains with us sparingly during the colder weather. I notice them migrating in hundreds from north to south every year during November ; they fly at a great height as a rule, although many come right down. Last year I shot several specimens in a very worn condition.

112. *CORACIAS CAUDATUS*, L. Moselikatz's Roller.

Common all over the flats and resting on low bushes.

113. *EURYSTOMUS AFER* (Lath.). Cinnamon Roller.

A very common visitor in all wooded localities ; the first appearance this season was one on the 28th Sept., followed by several a few days later. They are now building, or rather laying, in holes in old dead trees, which they invariably

prefer, and also a hole at the end of a horizontal branch near the top of a tree. A pair are building here near the house ; the male keeps constantly in close contact with the tree, settling on the highest branches, where he keeps up a continuous and monotonous chattering, darting off wildly at intervals for a short distance and returning again, often to the same branch. The female is seldom seen, and seems to remain in the hole for hours at a time, but, in this particular case, may be sitting. On the 15th November I found two eggs in a hollow tree, about 20 feet from the ground. The female flew from nest, which I shot. Eggs pure white and slightly incubated.

Later on in the season they can often be seen in small parties late in the evening, searching for insects on the wing, when they keep up a constant chattering, as is their custom. I have never once seen them approach the ground. Their flight is very erratic and sometimes very swift. They are not by any means shy, and generally easily shot.

114. *EURYSTOMUS GLAUCURUS* (St. Müll.). Madagascar Cinnamon Roller.

A male in not fully adult plumage was procured at Manga, near Beira, on the 31. 3. 06, and kindly identified for me by Mr. Haagner, of the Tvl. Museum. This is a new record for South Africa.

115. *MEROPS PERSICUS*, Pall. Blue-cheeked Bee-eater.

Very numerous here during the earlier part of the summer, arriving in September. Last year I observed 30 or 40 on Sept. 12, their first appearance in the district. They are particularly fond of mangrove-tree swamps, and during their stay may be seen every evening in hundreds roosting and flying over these trees in front of the town of Beira.

116. *MEROPS NUBICOIDES*, Des Murs & Puch. Carmine-throated Bee-eater.

Very scarce and only seen passing south in November and December. Mr. C. H. B. Grant procured a few specimens at M'Zimbiti, and also within six miles of Beira. I saw four last December at M'Zimbiti.

117. *MELITTOPHAGUS MERIDIONALIS*, Sharpe. Little Bee-eater.

Very common, nests in the banks along the railway. I found young birds in November 1907.

118. *DICROCERCUS HIRUNDINEUS* (Leht.). Swallow-tailed Bee-eater.

I found a nest on October 5th, built in the sand under a path used daily. Tunnel length 2' 6", diam.  $1\frac{1}{2}$ ", and oval chamber about 6" diam. It contained four eggs, very much incubated, oval, and of a pure white and shiny, size  $\frac{7}{8}$ "  $\times$   $\frac{3}{4}$ ". They were laid on bare sand. The female flew off the nest just as I approached. I followed her up into a wood close by and shot her; I saw the male but could not procure him. It was only by the merest chance that I found the nest, as it was in the side of a drain on the plantation; this drain was being cleaned out in readiness for the rainy season, and on seeing the hole, I dug it out, thinking to find eggs of *meridionalis*. Previous to this, I had never once seen either of the parent birds, although I walk over the path and the nest-hole three or four times every day.

I found another nest on October 29th, built in the embankment on the side of the railway; structure similar to above, but not so deep in. It contained three eggs, of a beautiful rich salmon-pink colour, but after blowing they were pure white, shiny, and quite clear, of the same size as above. I saw one of the parent birds leave the nest, which I followed up and shot (female); after waiting hidden near the hole for a long time, the male appeared, which I also shot. About a mile further along the line I came across a tree on which there were quite a dozen, and by hiding under a thick bush I managed to shoot five (two males, two females, and a young one). Their flight is very similar to that of *M. meridionalis*, but they keep to higher trees and are much more shy.

119. *HALCYON ALBIVENTRIS* (Scop.). Brown-hooded Kingfisher.

One of the most plentiful of the Kingfishers in the district.

I found a nest-hole in the river-bank in soft sand, about 2 feet 6 inches in depth,  $2\frac{1}{2}$  inches diameter, and the chamber at the end about 7 inches in diameter and oval in shape. It contained five eggs, laid on the bare sand, of a pale pink, but pure white and shiny after blowing (size  $1 \times 1\frac{5}{8}$  inch; all of the same size).

These eggs are considerably larger than those of *H. swainsoni* and of a much duller white; the nest-hole is larger.

I found another nest of same species in the railway embankment similar to above, containing four eggs, and caught the female.

Both nests were found on October 11th.

These birds are very wary and difficult to approach, but not so shy as *swainsoni*. I had considerable difficulty in getting the female of the first clutch found in the river-bank, and was quite unable to get a shot at either of the males. Their call-note is quite different to that of *swainsoni*, is much louder and emitted at intervals only. These birds are by no means always found near water, and seem to prefer wooded country; I have watched them often dart after dragon-flies and return again to the same tree. They are very fond of resting on telegraph-wires along the railway.

120. HALCYON CHELICUTI, Stanley. Striped Kingfisher.

Plentiful near the coast, especially among the mangrove-swamps.

121. HALCYON SWAINSONI (Smith). Grey-headed Kingfisher.

Very uncommon. I had only seen and shot one specimen previous to this season, but have lately taken two clutches of eggs, and in both cases seen the parents, shooting the male of one pair, and taking the female of the other off the nest, which contained three pure white eggs.

Both nests were found on Nov. 1st.

The birds are extremely shy and it was only by waiting hidden for some time that I could get a shot at the male, which flew on to the top of a very tall tree near by. They also keep up a constant call while near the nest and fly from tree-top

to tree-top in the vicinity, but well out of range, and as soon as hunted fly into the forest at once. The first nest I found was built in the river-bank in soft sand about 2 feet from the top, a tunnel about 18 inches long, 2 inches diameter, and at the end an oval chamber about 6 inches diameter. The eggs, four in number, were laid on the bare sand, and were of a beautiful salmon-pink colour and shiny, but pure white after blowing; size  $1\frac{5}{8} \times 1\frac{3}{8}$  inch, all about the same size. The other nest was in an embankment on the railway, and I saw the male just above the nest on telegraph-wires, and found the female on the eggs. Nest and eggs similar to the above. Both clutches were quite clear.

122. *CERYLE RUDIS* (L.). Pied Kingfisher.

A very common bird in this locality and very fond of mangrove-swamps on the sea-coast, where it may at any time be seen in quantity. I have often noticed from five to eight or nine together fishing. It also frequents inland waters, but usually only singly or in pairs.

123. *CERYLE MAXIMA* (Pall.). Giant Kingfisher.

Not by any means an uncommon species on inland waters, but very difficult to approach.

I have never seen this bird near the sea-coast, nor at river mouths where the water is salt.

[This is contrary to its custom in the Cape.—EDD.]

124. *ALCEDO SEMITORQUATA*, Sw. Half-collared Kingfisher.

Rather an uncommon bird round here.

125. *CORYTHORNIS CYANOSTIGMA* (Rüpp.). Malachite Kingfisher.

Very common.

126. *ISPIDINA NATALENSIS* (A. Sm.). Natal Kingfisher.

Very common, more so than the previous species.

127. *COLIUS STRIATUS MINOR*, Cab. Speckled Mousebird.

Common in certain districts all the year, and is especially fond of thick bush close to the sea-coast.

128. *COLIUS ERYTHROMELON*, Vieill. Red-faced Mouse-bird.

Occurs in flocks of 30 or 40 during the cool season, in low bush, generally thorn, near swampy ground. I have not seen any during the hot months.

129. *BUCORAX CAFER* (Schl.). Brom-vogel.

Very common and very difficult to shoot.

130. *BYCANISTES BUCCINATOR* (Tem.). Trumpeter Hornbill.

Common.

131. *LOPHOCEROS MELANOLEUCUS* (A. Leht.). Crowned Hornbill.

Very common.

132. *LOPHOCEROS ERYTHORHYNCHUS* (Tem.). Red-billed Hornbill.

Extremely common.

133. *HAPALODERMA NARINA* (Steph.). Narina Trogon.

Not at all uncommon during the summer months in all woods, but apparently very scarce during the colder season; in fact I have not seen any after the month of March, nor heard their call, which is continuous throughout the breeding-season. The males seem to far outnumber the females in this locality.

134. *CAMPOTHERA NOTATA* (Lcht.). Knysna Woodpecker.  
Very common.

135. *CAMPOTHERA BENNETTI* (A. Sm.). Bennett's Woodpecker.

Common in all forests.

136. *DENDROPICUS CARDINALIS* (Gm.). Cardinal Woodpecker.

Commonest of all Woodpeckers in this locality.

137. *THRIPIAS NAMAQUUS* (A. Leht.). Bearded Woodpecker.

Not uncommon in wooded districts.

138. *INDICATOR VARIEGATUS*, Less. Scaly-throated Honey-Guide.

I have only occasionally met with this bird.

139. *INDICATOR MINOR*, Steph. Little Honey-Guide.

Rather uncommon.

140. *LYBIUS TORQUATUS* (Dum.). Black-collared Barbet.

A very common species round here.

141. *STACTOLEMA LEUCOTIS* (Sund.). White-eared Barbet.

Very uncommon; I have only seen a few specimens, which were shot by Mr. C. H. B. Grant.

142. *BARBATULA BILINEATA* (Sund.). White-browed Tinker.

Uncommon here; have only shot a few specimens.

143. *COCCYSTES JACOBINUS* (Bodd.). Black-and-White Cuckoo.

Fairly plentiful in thick forests and low scrub during the hot months.

144. *CENTROPUS BURCHELLI*, Sw. Burchell's Coucal.

One of the commonest birds round here.

145. *CEUTHMOCHARES AUSTRALIS*, Sharpe. Green Coucal.

Very uncommon; I have only seen and shot one specimen.

146. *GALLIREX PORPHYREOLOPHUS* (Vig.). Purple-crested Laurie.

Very plentiful in all the woods.

I found a nest of this bird on Nov. 19th containing two eggs, and both had young birds in; I shot the hen. The nest was merely a slight hollow built entirely of twigs and not lined, and about 10 feet above the ground on the edge of a wood. Eggs pure white, round and shiny.

147. *TURACUS LIVINGSTONEI*, G. R. Gr. Livingstone's Lourie.

Rather uncommon; I have only seen a few here.

148. *PŒOCEPHALUS ROBUSTUS SUAHELICUS*, Rehw. Brown-necked Parrot.

Not uncommon in wooded districts. The plumage varies considerably. A specimen collected (now in the Tvl. Museum) has the crown strongly washed with scarlet.

In September 1906 I saw quite a number of these birds on different dates, usually in twos or threes. They are also very noisy when flying, and only settle on a tree for a few seconds at a time, unless it happens to be a feeding-tree. I on one occasion found a tree upon which these birds were feeding on its fruit, and shot five in one afternoon. It was amusing to see the extraordinary positions they got into when trying to get at the fruit, crawling about the branches high up in the tree. Their flight, like that of the preceding species, is very swift and high.

149. *PŒOCEPHALUS FUSCICAPILLUS* (Verr. & Des M.). Brown-headed Parrot.

Very common, usually in flocks of five to eight or nine.

When on the wing this bird keeps up a continuous shrieking, which may be heard a long way off. It is very fond of settling on dead trees, where it will remain sitting for a long time if undisturbed. It is very wary and difficult to approach. I have watched them feeding on the young shoots of certain trees, where they creep about the ends of the upper branches and are usually very difficult to see. If a bird is wounded it keeps up a continuous shrieking, which attracts the others; these do not fly away, but remain moving about in the trees. On this account I once managed to shoot four specimens on one tree. I have never yet found them at a water-hole. This species seems to feed throughout the day, although more often seen at early morning and at evening.

150. *STRIX FLAMMEA*, L. Barn Owl.

I have only once shot this bird in the woods, but found quite a colony of them in an unused building near the Beira Railway Station last year, and also procured one egg.



151. *STRIX CAPENSIS*, A. Sm. Grass Owl.

I have only seen one specimen, shot by Mr. C. H. B. Grant near Beira.

152. *GLAUCIDIUM CAPENSE* (A. Sm.). Barred Owlet.

A rather common bird round here. I have shot several specimens during the day resting in trees in woods and also in bamboo thickets. They are usually found in pairs.

153. *SYRNIUM WOODFORDI* (A. Sm.). Bush Owl.

Male shot 1. 4. 08, in thick woods, resting on a low branch of a large tree.

154. *SCOTOPELIA PELI* [Tem.], Bp. Pel's Fishing-Owl.

Very scarce.—I shot a male about seven years ago here, and another male last year. The latter bird was sitting on top of a very tall tree close to a vley in a thick wood.

155. *TINNUNCULUS DICKINSONI* (Scl.). Dickinson's Kestrel.

Male shot 20. 3. 08, sitting on a dead tree, on open cleared ground. There are several of these birds in this locality; they are partial to the open cleared ground and fond of settling on old dead tree-stumps. They are not very shy, usually allowing one to approach within easy gunshot. I have frequently seen them feeding on the ground and picking up grasshoppers and other insects in the early morning. They have a very shrill note, continually repeated.

156. *ASTUR POLYZONOIDES* (A. Sm.). Little Banded Goshawk.

A female shot 4. 3. 08, sitting in the middle of a tall thick tree; this is the only specimen I have seen up to now.

157. *HALIAËTUS VOCIFER* (Daud.). Sea Eagle.

A very common bird along the rivers and at the mouths of rivers, where it may be seen sitting on a mangrove-stump quite close to the water. I kept a male and female in captivity for about 1½ years and fed them entirely on fish.

158. *HELOTARSUS ECAUDATUS* (Daud.). Bateleur.

Not at all uncommon, but I have never yet been within gunshot range of one.

159. *MILVUS ÆGYPTIUS* (Gm.). Yellow-billed Kite.  
The commonest of our Falconidæ.

160. *CIRCUS RANIVORUS* (Daud.). S.A. Harrier.  
Not at all uncommon during the summer months.

161. *GYPS KOLBI* (Daud.). Kolbe's Vulture.  
A common bird round here; a flock of eighteen or twenty are always feeding and flying about the back of the town. I have not yet found where their nesting-place is.

162. *LOPHOGYPS OCCIPITALIS* (Burch.). White-headed Vulture.

I have only seen one specimen, which was shot by a friend of mine about 7 miles from Beira.

163. *POLYBOROIDES TYPICUS*, A. Sm. Harrier Hawk.  
Mr. C. H. B. Grant shot a specimen at M'Zimbiti, the only one I have seen.

164. *PELECANUS ROSEUS*, Gm. Eastern White Pelican.  
Very common here at the mouths of the rivers Pungue, Busi, and Sabi.

165. *EPHIPPIORHYNCHUS SENEGALENSIS* (Shaw). Saddle-bill.

I have only twice seen this bird, but was unable to get within gunshot.

166. *LEPTOPTILUS CRUMENIFERUS* ([Cuv.], Less.). Marabou.  
A common species in the district.

167. *SCOPUS UMBRETTA*, Gm. Hammerkop.  
Very common.

168. *ARDEA MELANOCEPHALA*, Vig. Childr. Black-headed Heron.  
Common.

169. *ARDEA PURPUREA*, L. Purple Heron.  
Very common.

170. *HERODIAS ALBA* (L.). Great White Egret.  
Not at all uncommon.

171. *HERODIAS BRACHYRHYNCHIA*, Boehm. Yellow-billed Egret.

Very common ; may be seen in flocks of 15-50 or more feeding on mud-flats at the mouth of the Pungue.

172. *ARDEOLA RALLOIDES* (Scop.). Squacco Heron.

Very common on inland swamps.

173. *ERYTHROCYNUS RUFIVENTRIS* (Sand.). Rufous-bellied Heron.

A very common bird on all inland swamps.

174. *BUTORIDES ATRICAPILLUS* (Afzel). Green-backed Heron.

*a.* Juv. Beira, 21.7.07.

175. *ARDETTA STURMI* (Wagl.). African Dwarf Bittern.

Very common.

176. *IBIS ÆTHIOPICA* (Lath.). Sacred Ibis.

Very plentiful on sand-banks in rivers.

177. *HAGEDASHIA HAGEDASH* (Lath.). Hadada.

Very common, and excellent eating.

178. *PLATALEA ALBA*, Scop. African Spoon-bill.

Very plentiful along rivers in large flocks.

179. *PHŒNICOPTERUS ROSEUS*, Pall. Greater Flamingo.

Very common in large flocks at certain seasons on rivers and salt mud-flats.

180. *PLECTROPTERUS GAMBENSIS* (L.). Spur-wing Goose.

Common on open waters and rivers.

181. *VINAGO DELALANDEI* (Bp.). Cape Green Pigeon.

Very common.

182. *TURTUR SEMITORQUATUS* (Rüpp.). Red-eyed Turtle Dove.

Very common.

183. *CHALCOPELIA AFRA* (L.). Emerald-spotted Dove.

Commonest of all the Columbidae here.

184. *FRANCOLINUS SEPHÆNA* (A. Sm.). Crested Francolin.  
Examples were shot by Mr. C. H. B. Grant at M'Zimbiti.

185. *PTERNISTES HUMBOLDTI* (Ptrs.). Humboldt's Francolin.

Very common in all wooded districts.

186. *EXCALFACTORIA ADANSONI* (Verr.). Blue Quail.  
Not uncommon, usually found in pairs.

187. *NUMIDA MITRATA*, Pall. E.A. Guinea Fowl.  
Very common, but not so plentiful as *G. edouardi*.

188. *GUTTERA EDOUARDI*, Hartl. Crested Guinea Fowl.  
Very common.

189. *TURNIX HOTTENTOTA* (Tem.). Hottentot Hemipode.  
Fairly common on the flats in long grass.

190. *TURNIX LEPURANA* (A. Sm.). Kurrichaine Hemipode.  
Uncommon on the flats.

191. *BALEARICA REGULORUM* (Benn.). Crowned Crane.  
Fairly common on inland vleys and rivers. I have seen four or five together in one small swamp; the natives catch these birds and bring them into town. I kept three in my garden for over two years; they become very tame in captivity.

192. *OTIS MELANOGASTER*, Rüpp. Black-bellied Knorhaan.  
I have only seen this bird on three occasions. Mr. C. H. B. Grant shot a specimen at M'Zimbiti.

193. *ÆDIGNEMUS VERMICULATUS*, Cab. Water Dikkop.  
I have only shot one specimen, a male, but I have seen several others; all were standing on the edge of a small river running through thick forest.

194. *DROMAS ARDEOLA*, Payk. Crab Plover.  
Have only shot one specimen, six miles inland.

195. *RHINOPTILUS CHALCOPTERUS* (Tem.). Bronze-winged Courser.

Very uncommon; I have only shot one specimen in the mangrove-swamps and seen a few others.

196. *ACTOPHILUS AFRICANUS* (Gm.). African Jacana.

A very common bird on all open waters.

197. *LOBIVANELLUS LATERALIS* (A. Sm.). Wattled Plover.

Very uncommon round this district.

198. *STEPHANIBYX INORNATUS* (Sw.). Swainson's Plover.

A very plentiful bird here in swampy land during the hot season; always seen in flocks of from 10-20 or 30, very shy and difficult to shoot.

199. *ÆGIALITIS HIATICOLA* (L.). Ringed Plover.

Apparently uncommon, as far as I know; I have only once shot this bird.

200. *NUMENIUS ARQUATUS* (L.). Curlew.

One of the commonest birds in the district.

201. *TOTANUS GLAREOLA* (L.). Wood Sandpiper.

Very common.

202. *TOTANUS OCHROPUS* (L.). Green Sandpiper.

Very common.

203. *TOTANUS HYPOLEUCUS* (L.). Common Sandpiper.

Very common.

204. *CALIDRIS ARENARIA* (L.). Sanderling.

May be seen in flocks of dozens.

205. *GALLINAGO MAJOR* (Gm.). Double Snipe.

Not at all uncommon in marshy ground.

206. *GALLINAGO NIGRIPENNIS*, Bp. Ethiopian Snipe.

Mr. C. H. B. Grant shot specimens at M'Zimbiti.

207. *ROSTRATULA CAPENSIS* (L.). Painted Snipe.

I picked up a specimen on the railway-line, dead, early one morning, but have never seen or shot any others.

208. *STERNA MEDIA* (Horsf.). Smaller Crested Tern.

One specimen procured.

## VII.—Occasional Notes.

1. SECRETARY BIRD AND SNAKES.—Last week I saw a Secretary Bird kill a snake three feet six inches in length. It accomplished the feat with great ease, but made no attempt to swallow its victim. This fact suggests the inference that the remains of snakes found in the stomachs of specimens examined may by no means represent the number of snakes killed.

C. MCG. JOHNSTON.

Bloemfontein, Aug. 7, 1908.

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2. DEPREDATORY HABITS OF GREY HERON (*Ardea cinerea*).—I saw a rather unusual thing the other day. On a farm in this district a Grey Heron descended on a flight of small birds driven up from a mealie-patch, and seizing a Sparrow by the leg tried to gulp it down, but let it go on the approach of a man. I always knew the bird was a good mouser, but have never heard of its preying upon other birds before.

ROLAND CHAMBERS, R.M.

Bethulie, O.R.C.,  
Aug. 2, 1908.

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3. PROHIBITION TO IMPORT THE PLUMAGE AND SKINS OF WILD BIRDS.—The above Bill, which is the work of Lord Avebury (perhaps better known as Sir John Lubbock), was read a second time in the House of Commons on May 19th and referred to a Select Committee.

The following extracts may be of some interest:—

“The object of this Act is to check the wanton and wholesale destruction of birds which is being carried on everywhere throughout the British Empire, and in all parts of the world, without regard to the agricultural, educational, and æsthetic value of birds. As a proof of the extent of the destruction that at present goes on, and which is threatening the extinction of some of the most beautiful species, it may be mentioned that at the plume-auctions held in London during the last six months of 1907 there were catalogued 19,742

skins of the Birds of Paradise, 1411 packages of the nesting-plumes of the White Heron (representing the feathers of nearly 115,000 birds), besides immense numbers of the feathers and skins of almost every known species of ornamental-plumaged bird. At the June sale, held at the Commercial Sale Rooms, 1386 Crowned Pigeons' heads were sold, while among miscellaneous bird-skins one firm of auctioneers alone catalogued 20,000 Kingfishers. A deplorable feature of the recent sales is the offer of large numbers of Lyre-birds' tails and of Albatross quills. The constant repetition of such figures as those given above—and these plume-sales take place at least every two months—shows that the Legislature must choose between the extermination or the protection of the birds in question."

The protective clauses of the Bill are:—

"1. Any person who, after January first, one thousand nine hundred and nine, shall import or bring into the United Kingdom for the purpose of sale or exchange the plumage, skin, or body, or any part of the plumage, skin, or body, of any dead wild bird which is not included in the schedule of exemption to this Act, shall be guilty of an offence, and shall on summary conviction be liable to a penalty of not exceeding five pounds, and for every subsequent offence to a penalty of not exceeding twenty-five pounds, and in every case the Court shall order the forfeiture and destruction of the articles in respect of which the offence has been committed.

"Provided that this section shall not apply—

"(a) to anything done by virtue of a licence issued from time to time by the Board of Trade under such conditions and regulations as they may prescribe for the purpose of supplying specimens of any birds not included in the schedule to any particular natural history or other museum or for the purpose of definite scientific research: or

“(b) to the plumage, skin, or body, or to any parts thereof, of any bird not included in the schedule to this Act and forming part of the wearing apparel being *bona fide* the property of and either actually in the use of or accompanying any person entering the United Kingdom and not being for the purpose of sale or exchange. Every such person shall if so required make a written declaration to this effect.

“2. On the advice and with the consent of the Privy Council the name of any other foreign wild bird may at any time be added to or removed from the schedule to this Act by notice published in the ‘Gazette,’ and thereupon the provisions of this Act shall take effect as if such bird had been included in or removed from the schedule to this Act.

“The following is the schedule referred to in the Bill :—

“*Birds Exempted.*

“1. Ostriches.

“2. Eider Ducks.

“3. Wild Birds used as articles of diet.”

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4. ON PROTECTIVE RESEMBLANCE IN SOUTH AFRICAN BIRDS.—Mr. Haagner’s paper in the April number of this Journal deals with an interesting subject, and one may share his hope that it will receive the attention of local ornithologists.

In referring to the game-birds as well as the Goatsuckers and some others as instances of Protective Resemblance, Mr. Haagner is of course on safe and familiar ground. To take what seems an undoubted case, such as the Quail. Here we find a type of coloration which seems clearly to be an adaptation for the purpose of concealment. Moreover, the Quail has the habit of, in the first instance, remaining motionless in the face of danger—a habit which seems to be the necessary accompaniment of protective coloration. The value



of this coloration, together with the habit referred to, are obvious to anyone who has watched a Hawk working over veld which is known to contain Quails.

But when some of Mr. Haagner's other instances are examined it is not so easy to agree with his conclusions. Whilst not claiming to be an ornithologist, I am interested in the theory under discussion, and would beg leave to deal with some of the cases of birds with which I am tolerably familiar.

PLOCEIDÆ.—The fact that the females are generally obscurely coloured does not necessarily imply that they are protectively coloured. Mr. Haagner says their coloration “renders them almost invisible to the casual eye.” Perhaps it does, but this fact by itself does not appear to me to be sufficient reason for including these birds among cases of Protective Resemblance. Can it be said that having regard to their habits their coloration assimilates so closely to their usual surroundings as to warrant the belief that it would assist in concealing them from the vigilant eye of a hawk, a snake, or a mungoose? I think not. It may be pointed out that in the case of the Bishop Birds or the Widow Birds, the females, at the time when they most need concealment, viz. during nesting, are concealed in domed nests. Again, in winter, these birds are generally found in large flocks, and are then active and fairly noisy birds, evidently relying more on vigilance than on concealment for safety.

NECTARINIIDÆ.—It seems to me quite impossible to cite either the Black, the Scarlet-breasted, or the Malachite Sunbirds as instances of Protective Resemblance, without unduly straining the whole theory. No doubt these birds are sometimes difficult to distinguish amid some of their surroundings. As Mr. Selous, in his latest book ‘African Nature Notes and Reminiscences,’ says, “there is no colour in nature and no combination of colours which at a certain distance, if stationary, would not be found to harmonize well with some portion of or objects in an African landscape.” But such harmonizing with surroundings is not necessarily Protective Resemblance.

The Sunbirds are active, strong-flying little birds, which do not appear to depend in any way on concealment for safety, and spend as much of their time in the open chasing and capturing insects as they do in sucking nectar from flowers. The Black Sunbird does not appear to lose its brilliant colours throughout the year. No doubt it is difficult to distinguish this bird amid the Kaffir Boom flowers, but these trees are only in flower during a few weeks in the year, and it cannot be suggested that the Black Sunbird's colour has been acquired for concealment among Kaffir Boom flowers. Again, this Sunbird is found where there are no Kaffir Booms, and frequents many flowers which in no way resemble its colour. At the time of writing these lines (May) there are generally three male Black Sunbirds in full plumage in my garden every morning, darting about among the bare branches of the fruit-trees, or gathering nectar from the eucalyptus flowers, and in my opinion they can only be described as quite conspicuous.

Mr. Haagner's remarks regarding the Malachite or Long-tailed Green Sunbird are not clear to me. The flowering period of the Mimosa Thorn lasts a very short time in each year, and the bird is not specially or even usually associated with Mimosa Thorns in my observation, and is found plentifully where there are no thorns. Stark says that *N. jamosa* frequents Proteas, and it is clear that there can be no close resemblance between the colour of the leaves or flowers of Proteas and the brilliant metallic green of the bird. If it is correct to say that the Malachite Sunbird loses its bright plumage about the time that the Mimosa Thorn sheds its leaves, it is equally certain that before the Thorn is in leaf again, and certainly long before it is in flower, there are plenty of these Sunbirds in all stages of plumage to be found hovering round the orange and brick-red coloured flowers of the thorny-leaved Aloe, which grows all along the Rand, and in regard to which there can be no question of Protective Resemblance.

In concluding, I would say that Mr. Haagner's observations

on the young Fiscal Shrikes are most interesting, and seem to point to a good case of a modification of habit for the purpose of concealment.

HAROLD FRY.

Rock House, Bertramstown, Johannesburg,  
May 31, 1908.

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5. MARABOU STORK AND FLAMINGOES AT PORT ELIZABETH.—The following may be of interest :—A Marabou Stork (*L. crumeniferus*) was shot yesterday at Cookhouse, within a few miles of Port Elizabeth, on the bank of the Zwartkops River. This I believe is a new locality. A big flock of Flamingoes have been frequenting the same river, and have approached within three or four miles of Port Elizabeth. One was shot last month. They have appeared in this locality during November and December for several years.

F. W. FITZSIMONS, Director, Port Elizabeth Museum.  
Port Elizabeth, Dec. 16, 1908.

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6. A SPECIAL Meeting to commemorate the fiftieth Anniversary of the Foundation of the British Ornithologists' Union was held in the Zoological Society's Rooms at 3 Hanover Square, on Wednesday the 9th December, 1908. The agenda included—

- (i.) An Address by the President.
- (ii.) A Short History of the Union and its Founders.  
By Dr. P. L. SCLATER.
- (iii.) Notices of the Life and Work of some of the principal Members of the Union. By Mr. A. H. EVANS.
- (iv.) The Presentation of Gold Medals to the Four Surviving Original Members.

The Meeting was followed by a Dinner at the Trocadero Restaurant, and an exhibition of Cinematograph photographs of Bird-life.

On behalf of the S. A. O. U. the Secretary cabled to Dr. Sclater on the morning of the 9th December: "South Africans' hearty congratulations," which has been acknowledged by the B. O. U. with warm thanks.

VIII.—*Short Notices of Ornithological Publications.*I. *The Ibis: a Quarterly Journal of Ornithology.*

The July 1908 number contains a continuation of Mr. C. F. M. Swynnerton's papers on the birds of Gazaland. It is illustrated by a beautiful chromo-lithographic plate depicting the eggs of the following birds:—*Nectarinia arturi*, *Cinnyris olivacea*, *Serinus sharpei*, *Sitagra ocellaria* (a pale blue-green mottled with olive-green variety), *Dryoscopus guttatus* (= *Laniarius major*), *L. quadricolor*, *L. starki*, *Batis erythrophthalma*, *Terpsiphone plumbeiceps*, *Smithornis capensis*, *Cossypha natalensis*, *C. heuglini*, *Phyllastrephus milanensis*, *P. capensis*, *P. flavostriatus*, *Chlorocichla occidentalis*, *Erythacus swynnertoni*.

The following are recorded from South Africa for the first time:—*Cypselus aquatorialis*, v. Müll., *Dendropicus zanzibari*, Malh., and *Melocichla orientalis*, Sharpe. In this paper Mr. Swynnerton follows the error made by Mr. W. L. Selater in calling the Brown-necked Parrot *P. robustus angolensis*, when it should be *P. r. suahelicus* (vide Rehw. vol. ii. pp. 8 & 9).

In the account of the Annual General Meeting we are pleased to see that new rules have been passed which will assist in the preservation of certain birds in the British Isles.

The October number, which is the 200th (and the last of the 50th Anniversary), contains only a short paper on the "Breeding-seasons of the Birds in Southern Kamerun," by G. L. Bates, of interest to South African ornithologists.

II. *The International Convention for the Protection of Birds concluded in 1902; and Hungary*, by Otto Herman, Director of the Hung. Centr. Bur. of Ornithology. (Budapest, 1907.)

This is an account of the European movement for the protection of birds and is issued under the auspices of the Hungarian Minister of Agriculture. The subject was discussed at each of the International Ornithological Congresses

(Vienna, 1884 ; Budapest, 1891 ; Paris, 1895). At the 3rd Congress schedules of species were actually drawn up, but differences of opinion caused Great Britain, Russia, Holland, and Italy to withdraw their representatives. After several years of discussion the Convention for the Protection of Birds became an accomplished fact in 1906, the signatories being Austria, Hungary, Germany, France, Spain, Belgium, Portugal, Monaco, Luxemburg, Sweden, Norway, and Switzerland.

The history of the development of the Convention is very fully given, with excerpts from the laws affecting Bird Protection in each of the European countries. A full account of the Protection of Birds in Hungary and an index of bird-names are included.

At the recently concluded Agricultural Congress in Pretoria, some of the delegates brought up the question of the Protection of Birds, but Dr. J. W. B. Gunning, Director of the Transvaal Museum and Zoological Gardens, proposed that the Government should appoint a special Committee to obtain information, and enquire into the Protection of Birds with a view to ultimate legislation, which proposal was duly adopted.

### III. *Bulletin British Ornithologists' Club.*

In the January 1908 number we have the description of a new subspecies of Francolin (*Fr. jugularis pallidior*) from German S.W. Africa, and in the February number that of *Pterocles bicinctus multicolor* from Rustenberg — both by Dr. Ernst Hartert, of Tring. The last number also contains the description of a new Seed-eater (*Poliospiza meunelli*, resembling *P. gularis*) from Rhodesia, by Mr. E. C. Chubb, the Assist. Curator of the Rhodesia Museum.

In the March number we have a record of the remainder of the additions to the South African list from the collections of Mr. C. H. B. Grant, made during his seven years' collecting in this country for the Rudd Zoological Survey; these are :—

*Francolinus kirki*, Beira.

*Turacus reichenowi*, Beira.

*Campothera fülleborni*, Beira.

*Chatura anchieta*?, Tete.

*Sigmodus scopifrons*, Beira.

*Pytelia afra*, Gorongoza district.

Mr. Grant also rediscovered the long-lost *Hypargus margaratus* (Strickl.), which he met with at Inhambane, and discovered a new species, herein described by Dr. Sharpe as *Pyrenestes granti* (similar to *P. coccineus*).

In the May number we have descriptions of a new Grass-bird (*Sphenæacus transvaalensis*) from the Woodbush, resembling *S. natalensis*; also *Apalis ruddi* (similar to *A. griseiceps*) and *Cinnyris neerguardi* from Inhambane District.

Mr. Grant further records the following species for the first time within southern limits:—

*Galactochrysea emini* (Shelley), from Tete.

*Batis soror*, Rchw., P.E.A.

*Orthostomus erythropterus* (Jard.), Gorongoza.

*Cinnyris microrhynchus*, Shelley, Inhambane.

This number also contains the description of a new species of Warbler (*Calamocichla zuluensis*) by Oscar Neumann, resembling *C. gracilirostris*, Hartl., and *C. leptorhyncha*, Rchw. Type in Tring Museum, and collected by R. B. and J. D. S. Woodward at Eschowe, Zululand.

#### IV. 'Avicultural Magazine.'

The October 1908 number contains a note on the breeding in England of the Knysna Lourie (*Turacus corythaix*), by the Rev. H. Astley. The parents did not succeed in rearing the young however. The same number contains a paper by Captain B. R. Horsbrugh, A.S.C., on the breeding of the Kurrichaine Button Quail (*Turnix lepurana*) in captivity in his aviaries at Potchefstroom. The October number contains an account of the breeding of the Black-cheeked Love-bird (with coloured plate) in England by Reg. Phillips.

V. *Proceedings of the Academy of Natural Sciences of Philadelphia*, vol. lx. part i. (1908), contains an interesting paper by Witmer Stone, on the "Methods of Recording and Utilizing Bird Migration Data." He dwells upon the importance of comparing the records of several observers at practically the same locality; and demonstrates from the records of the Delaware Valley Ornithological Club how regular were the arrivals of many migratory birds. He considers the best and most accurate results obtainable by having a large number of observers in a limited area and combining their results.—This may be possible in a thickly populated country like America, but here in S.A. we have so far not been able to get *one* observer in each district.

VI. *Annals of the Transvaal Museum*, vol. i. no. 3 (January 1909).

This No. contains the following descriptions of new birds, which may not be out of place reproduced herein :—

*Description of Two new Species of Birds in the Transvaal Museum.* By Dr. J. W. B. GUNNING, Director.

ANTHREPTES REICHENOWI, sp. nov.

Description : *Male*. Above pale olive-green, a little paler on the upper tail-coverts; front half of crown, chin, and throat, as far as upper breast, bright metallic idigo-blue with violet reflections; the edges of the metallic patch more inclined to steel-blue. Lores and a ring round the eye pale yellow, the former shaded with dusky. Wings olive-brown, the feathers being edged with olive-green; paler on the remiges, inner margins of the latter pale whitish-grey.

Tail olive-brown, the feathers edged with olive-yellow. Under surface yellow, strongly washed with greyish-olive, particularly on the flanks and sides of the chest. Pectoral tufts pale yellow; axillaries pale yellow; under wing-coverts white tipped with pale yellow, those on carpal bend pale yellow.

Length 106 mm.; wing 55·5; tail 44·5; tarsus 15; culmen 15·5.

Female : Coloured much like the male, but is without the metallic parts, the throat and forehead being pale yellow-grey. The upper surface is slightly paler and the lower duskier than the male.

Length 100 mm.; wing 54; tail 37; tarsus 14·5; culmen 15.

*Male.* Mzimbiti, near Beira, Portuguese South-East Africa, 17th May, 1908. (P. A. Sheppard.)

*Female.* Mzimbiti, near Beira, Portuguese South-East Africa, 6th July, 1908. (P. A. Sheppard.)

It is somewhat difficult to know where to place this bird, as all its characters are not in accordance with the definition of the genus *Anthreptes*; the beak being distinctly curved (even the keel of the lower mandible being slightly curved).

In general appearance the bird comes nearest to the illustration of *Cinnyris reichenbachii* in Shelley's 'Monograph of the Nectariniidae,' but the blue is deeper and only reaches as far as the middle of the crown and does not include the ear-coverts, which are olive-green. On the under surface the grey is not half so pronounced, and the tail is only slightly rounded, not graduated. It is also considerably smaller.

#### HEMIPTERYX MINUTA, sp. nov.

This bird is considerably smaller than *textric*, is not streaked on the flanks and breast, and has a comparatively shorter tail.

Description : Feathers of the upper surface blackish-brown edged with pale brown, rustier on the wings, and on the wing- and upper tail-coverts. Crown reddish-brown, the bases of the feathers being darker, giving a mottled appearance. A short eyebrow, and the cheeks greyish-cream, shading into pale rusty-brown on the nape, forming an indistinct collar. Lores blackish. Under surface greyish-white, the sides of the chest dusky-brown, the flanks fawny; under tail-coverts tawny-white. Tail blackish-brown, the feathers (excepting the central pair) narrowly tipped with white. Thighs tawny-rufous.



Female: Length 89 mm.; wing 49; tail 24; tarsus 20; culmen 9·5. Waterfalls, Haenertsburg, 5th February, 1908. (Iris tawny; bill horn above, light brown below, tip darker. Tarsus ashy-yellow. F. V. Kirby.)

Male: Length 90 mm.; wing 49·5; tail 24·5; tarsus 20; culmen 9·5. Woodbush Forest Reserve, Zoutpansberg, 29th January, 1908. (Iris dark brown. Bill dark brown. Tarsus light pinkish-yellow. Gape olive. F. V. Kirby.)

These birds were collected by Mr. F. Vaughan-Kirby in the north-central Transvaal.

*On a new Species of Cossypha from West Pondoland.* By Dr. J. W. B. GUNNING, Director of the Transvaal Museum.

Among a collection of birds collected by H. H. Swinny at Ngqeleni in West Pondoland, shot on 2nd August, 1908, I found a specimen which at first sight I took for *Cossypha b color* (Sparrm.). Closer examination, however, showed that I had to do with a new and very distinct species. In *bicolor* the sides of the face, ear-coverts, and lores are black, which is entirely absent in the new species, which I desire to name after my assistant, Mr. A. K. Haagner, the energetic Secretary of the South African Ornithologists' Union.

COSSYPHA HAAGNERI, sp. nov.

Description: Adult female, above, including the crown and wing-coverts, bluish slate-grey, merging into orange on the rump and upper tail-coverts. Lores, a broad stripe over the eyes, ear-coverts, under wing- and under tail-coverts and entire under surface of the body uniform bright orange. Back of the neck washed with orange-brown. Primaries blackish, broadly margined with bluish-grey on the outer web, except the first two, which are entirely black. Tail: Outer feather inner web orange, outer web dark brown, second, third, and fourth orange, fifth orange margined near the tip with dark brown, middle feather entirely dark brown.

Bill black, iris brown, feet pinkish brown.

Length 198 mm. in the flesh ; wing 93 ; tail 91 ; bill 15 ; tarsus 31.

The type is in the Transvaal Museum.

*Descriptions of Two new Species of Flycatchers from Portuguese South-East Africa.* By ALWIN HAAGNER, Assistant, Transvaal Museum.

Amongst a small collection of skins sent me in August, 1908, for verification and identification by Mr. P. A. Sheppard, of Beira, several appeared to be new to science. To make certain of this before describing, they were sent to Dr. Reichenow, of the Berlin Museum, for comparison, who very kindly acceded to my request, for which I wish to tender him my thanks and due acknowledgment.

From the locality in which Mr. Sheppard resides, a collection of birds has already been made by a trained collector—Mr. C. H. B. Grant, of the British Museum—and from which several new species have been described, so it is all the more noteworthy that, in addition, three new species and several new records for South Africa have been discovered by Mr. Sheppard.

I have named the first species after its discoverer, and for the second a new genus seems necessary, to which I have also attached the name of its collector, giving to it the specific name of *gunningi*, in honour of Dr. J. W. B. Gunning, Director of the Transvaal Museum, who is now my chief. These birds have since been acquired by the Transvaal Museum.

BATIS SHEPPARDI, sp. nov.

(A.) Male. Top of the head and nape grey ; a broad black band from the bill through the eye, over the cheek, and continued on to the nape ; above this, a short, narrow, white line, forming the commencement of an eyebrow. Upperside olive-brown, the feathers of the mantle and back with more or less partly hidden white spots ; rump much greyer. Upper tail-coverts black ; throat and sides of neck snow-white, followed by a broad breast-band of orange-brown, which is

continued on either side of the body on to the flanks, fading into whitish on the lower portion. Middle of the under-surface from the breast-band to the vent (including under tail-covert) white. Axillaries and under wing-coverts for the inner half white; those nearest the edge of the wings black, tipped with white. Upper wing-coverts black, the median broadly tipped with white and the inner greater-coverts with the outer web also white. Rectrices tipped with white, the two outer feathers being also edged with white, very narrowly on the inner, broader (about half of the web) on the outer web. Length (of skin) 111 mm.; wing 60, 75; tail 35; tarsus 18.5; bill 12; sex, incert. Locality: Mzimbiti, about twenty-three miles from Beira, Portuguese South-East Africa. 27th May, 1908. (P. A. Sheppard.)

I take this bird to be a male, from the pure white chin and throat, as the females of both *molitor* and *capensis* have a large patch of orange-brown on the throat, from both of which, if a female, it differs in the absence of this patch. In addition, the red flanks distinguish it from *molitor* and the black upper wing-coverts from *capensis*.

(B.) Female. Not quite adult; collected on the 3rd May, 1908, at the same place as the preceding skin. This example has the sides of the face dark grey, and an eyebrow of buffish-white from the base of the bill, carried on to the temporal region; chin white; throat whitish, strongly washed with orange-brown. Flanks grey. Wings like that of *B. capensis* female. Length 110 mm.; wing 59; tail 35; bill 12.

Professor Reichenow asked me to compare these birds with the description of *B. erythrophthalma* of Swynnerton before describing, with which, however, it cannot be confused, as I have already shown; Swynnerton in his description distinctly stating that his bird resembles *B. capensis*, differing only in size and in the coloration of the iris, while my bird differs considerably from *B. capensis*.

#### SHEPPARDIA, gen. nov.

Resembling *Bradornis* in the narrower bill (6.25 mm. broad

at base), tail shorter than the wing and nearly square (only the outer feather on either side hardly a mm. shorter than the others); differing from that genus in that the fourth to sixth primaries are the longest, the second longer than the eighth; rictal bristles well developed, reaching to within 5 mm. of the tip of the bill.

SHEPPARDIA GUNNINGI, sp. nov.

Male. Upperside olive-brown, greyer on the head and rustier on the rump and upper tail-coverts. A white eyebrow from the base of the bill behind the nostrils, till beyond the eye. Lores and ear-coverts greyer. Under surface ochreous-orange or pale orange-rufous; the centre of the body from the lower-breast to the under tail-coverts white, the latter slightly tinged with yellowish. Thighs grey. Upper wing-coverts slate-grey, the median shaded and edged with olive. Remiges brown, the first six or seven being edged with grey, and the remainder with rusty olive. Under wing-coverts whitish, tipped with pale yellow, those along the outer edge of the wing grey. Bill dark brown above, and tip of lower mandible; base of lower pale horn. Tail brown, the feathers edged with rusty olive on the outer web. Length 130; wing 70.5; tail 46.75; bill 13; tarsus 19. Type in Transvaal Museum. Male: Mzimbiti, near Beira. 5th January, 1908. Collector: P. A. Sheppard.

This bird, which in general coloration resembles the *Callene cyornithopsis* of Sharpe (Bull. B. O. C. xii. 1901, and 'Ibis,' 1902, p. 95, plate 4), and which I at first took for *C. sharpei* or *C. æquatorialis*, differs from these birds in its almost square tail, and in not agreeing with Reichenow's diagnosis of the generic character: "Schnabel seitlich zusammen gedrueckt," whereas this bird has a flatter bill, resembling that of *Bradornis*, but a little more slender. Dr. Reichenow has kindly examined the skin for me, and says that in his opinion it is certainly a "Muscipape." From *cyornithopsis* it differs in having only the centre of the abdomen white, thereby resembling Jackson's *æquatorialis*, but differing from the latter in the colour of the under tail-coverts, which in *æquatorialis*

are "orange-rufous" (cf. Bull. B. O. C. cxxi., January 1906, p. 46). From both of the just mentioned species *gunningi* is further distinguished by its white eyebrow, and from these, as well as *sharpei*, by its grey upper wing-coverts.

*Description of a new Warbler of the Genus Cisticola.*

By ALWIN HAAGNER, Assistant, Transvaal Museum.

Amongst the small collection of birds sent by Mr. P. A. Sheppard, from the neighbourhood of Beira, and mentioned in my previous paper in this number of the 'Annals,' was a little Warbler which appeared to be undescribed. In revising the Museum collection of Warblers I came across another specimen from Matabeleland, which appears to be identical with the Beira bird, except that it is a little larger. I have since also found another example in the recently acquired collection of Messrs. Kirby and Roberts, from the Boror District, just north of the Zambezi River, Portuguese South-East Africa.

*CISTICOLA CINNAMOMEICEPS*, sp. nov.

Similar to *fulvicapilla*, but differing in that the underparts are whitish, only the sides of the breast and body and flanks being greyish, the flanks and chest washed with yellowish; cheeks pale tawny, and not dusky-grey, as in *fulvicapilla*.

*Description:* Above drabish-brown, with a wash of tawny. Top of head and nape pale chestnut-brown or "cinnamon-rufous." Under surface whitish with here and there a yellowish tinge. Sides of the breast and flanks grey, washed with very pale tawny-yellow. Under tail-coverts dirty white. Thighs pale fulvous. Tail coloured like the back, with the ends of the feathers paler, and a faint indication of a subterminal dusky bar. Lores, eyebrow, and cheeks pale tawny-yellow, the latter streaked with dusky. Remiges brown, edged with pale fulvous on the outer web, the edging of the outermost primaries being nearly white. Inner web margined with pale rufous. Bill: Upper mandible pale horn-brown; lower pale yellowish.

- (a) Male. Matabeleland, 16th September, 1905. (C. Wilde.) Length 108 mm.; wing 52; tail 42·75; tarsus 18·5; bill 11.
- (b) Sex uncertain. M'Zimbiti, near Beira, 12th January, 1908. (P. A. Sheppard.) Length 100 mm.; wing 50; tail 39; tarsus 18; bill 11.

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IX.—*On Birds collected between Bulawayo and the  
Tegwani River.* By E. C. CHUBB, F.Z.S.

THE following birds were collected by Mr. Richard Douglas, to whom I am indebted for allowing me to examine them, during a short trip from Bulawayo to the Mission Station on the Tegwani River, in which the Khami, Gwaai, and Manzanmyama Rivers were crossed respectively about 10, 27, and 30 miles north-west of the railway. The altitude is about 4500 feet.

1. CINNYRICINCLUS LEUCOGASTER VERREAUXI (Bocage).  
Verreaux's Glossy Starling.

a. ♂ jv. 15 March. Gwaai River.

b. ♂. 17 „ Gambo's.

c. ♂. 24 „ Nonyonko's, Manzanmyama River.

a is in the brown plumage; there are no signs of the metallic violet feathers of the adult appearing.

2. ORIOLUS LARVATUS, Licht. Black-headed Oriole.

a. ♂. 15 March. Gwaai River.

b. ♂. 25 „ Tegwani River.

c. ♂ imm. 23 „ Gambo's, Manzanmyama River.

d. ♂ imm. 24 „ Nonyonko's, Manzanmyama R.

The heads of c and d are mottled black and yellow, except the ear-coverts, which are entirely black; the breasts are streaked with black, and the bills are black.

3. *VIDUA PARADISEA* (Linn.). Paradise Widow Bird.

*a.* ♂. 24 March. Nonyonko's, Manzamnyama River.

4. *POLIOSPIZA GULARIS* (Smith). Streaky-headed Seed-eater.

*a.* ♀. 15 March. Gwaai River.

5. *CINNYRIS GUTTURALIS* (Linn.). Scarlet-chested Sunbird.

*a.* ♂. 13 March. Khami River.

6. *UROLESTES MELANOLEUCUS* (Jard. & Selby). Long-tailed Shrike.

*a, b, c.* 2 ♂ ♂, 1 ♀. 18 March. Gambo's, Manzamnyama R.  
All moulting.

7. *NILAUS BRUBRU* (Lath.). Brubru Shrike.

*a.* ♀. 13 March. Khami River.

8. *LANIARIUS ATROCOCCINEUS* (Burchell). Black-and-Crimson Shrike.

*a, b, c.* 2 ♂ ♂, 1 ♀. 20 March. Gambo's, Manzamnyama R.  
*d, e.* 2 ♂ ♂. 22     „     „     „

9. *PRIONOPS TALACOMA*, Smith. Smith's Helmet-Shrike.

*a.* ♀. 13 March. Khami River.

*b, c.* 2 ♂ ♂. 17     „     Gambo's, Manzamnyama River.

10. *CRATEROPUS JARDINII*, Smith. Jardine's Babbler.

*a.* ♀. 21 March. Gambo's.

11. *CRATEROPUS BICOLOR* (Jardine). Pied Babbler.

*a, b.* ♂ ♀. 17 March. Gambo's, Manzamnyama River.

*c, d.* ♂ ♀. 21     „     „     „

12. *CISTICOLA CINNAMOMEICEPS*, Haagner. Cinnamon-crowned Grass-Warbler.

*a.* ♂. 15 March. Gwaai River.

13. *TURDUS LITSIPSIRUPA* (Smith). Ground-scraper Thrush.

*a.* ♂. 17 March. Gambo's, Manzamnyama River.



14. *PACHYPRORA MOLITOR* (Hahn & Küster). White-flanked Flycatcher.

*a.* ♂. 23 March. Gambo's, Manzanynama River.

15. *DICRURUS AFER* (Licht.). Fork-tailed Drongo.

*a, b.* ♂ ♀. 19 March. Gambo's, Manzanynama River.

16. *UPUPA AFRICANA*, Bechst. South African Hoopoe.

*a, b.* 2 ♀ ♀. 20 March. Gambo's, Manzanynama River.

17. *IRRISOR VIRIDIS* (Licht.). Kakelaar.

*a.* ♂. 7 March. Khami River.

Measurement of wing 6·5 inches, tail 9·8.

18. *RHINOPOMASTUS CYANOMELAS* (Vieill.). Scimitar-bill.

*a.* ♂. 20 March. Gambo's, Manzanynama River.

19. *CAPRIMULGUS FOSSII*, Hartl. Mozambique Nightjar.

*a, b, c.* 2 ♀, 1?. 19 March. Gambo's, Manzanynama R.

20. *CORACIAS MOSAMBICUS*, Dresser. Purple Roller.

*a.* ♂. 17 March. Gambo's, Manzanynama River.

*b.* ♀. 22       "       "       "

21. *MELITTOPHAGUS MERIDIONALIS*, Sharpe. Little Bee-eater.

*a.* —. 19 March. Gambo's, Manzanynama River.

22. *CERYLE RUDIS* (Linn.). Pied Kingfisher.

*a.* ♂. 19 March. Gambo's, Manzanynama River.

23. *HALCYON CHELICUTI* Stanley. Striped Kingfisher.

*a.* ♂. 17 March. Gambo's, Manzanynama River.

*b.* ♂. 23       "       "       "

24. *LOPHOCEROS MELANOLEUCUS* (Licht.). Crowned Hornbill.

*a.* ♂. 17 March. Gambo's, Manzanynama River.

25. *TRICHOLOEMA LEUCOMELAS* (Bodd.). Pied Barbet.

*a.* ♂. 17 March. Gambo's, Manzanynama River.

Evidently a young bird. The bill seems very small: it measures 7 inch.

26. *TRACHYPHONUS CAFER* (Vieill.) Crested Barbet.

*a.* ♂. 23 March. Gambo's, Manzanmyama River.

27. *COCCYSTES JACOBINUS* (Bodd.). Black-and-White Cuckoo.

*a, b.* ♂ ♀. 21 March. Gambo's, Manzanmyama River.

28. *SCHIZORHIS CONCOLOR* (Smith). Grey Lourie.

*a, b.* 2 ♂ ♂. 16 March. Gwaai River.

29. *ASIO LEUCOTIS* (Temm.). White-faced Owl.

*a.* ♂. 20 March. Gambo's, Manzanmyama River.

*b.* ♀. 22 „ „ „

30. *GLAUCIDIUM PERLATUM* (Vieill.). Pearl-spotted Owl.

*a.* ♀. 13 March. Khami River.

*b.* ♀. 22 „ „ Gambo's, Manzanmyama River.

31. *BUTEO DESERTORUM* (Grill.). Steppe Buzzard.

*a.* ♂. 9 March. Khami River.

This is the first record of the occurrence of this species in Southern Rhodesia.

32. *MILVUS ÆGYPTIUS* (Gmel.) Yellow-billed Kite.

*a* ♂. 24 March. Nonyonko's, Manzanmyama River.

33. *ASTUR POLYZONOIDES* (Smith). Little Banded Goshawk.

*a.* ♀. 20 March. Gambo's, Manzanmyama River.

*b.* ♀. 22 „ „ „

*c.* ♂. 24 „ „ „

34. *MELIERAX MECHOWI*, Cab. Mechow's Goshawk.

*a.* ♂. 14 March. Khami River.

*b.* ♂. 16 „ „ Gwaai River.

35. *CICONIA ALBA*, Gurney. White Stork.

*a.* —. 18 March. Gambo's, Manzanmyama River.

6. *SARCIDIORNIS MELANONOTA* (Penn.). Knob-billed Duck.

*a.* ♀. 19 March. Gambo's, Manzanmyama River.

37. *VINAGO DELALANDII* (Bp.) Cape Green Pigeon.

*a.* ♂. 24 March. Nonyonko's, Manzamnyama River.

38. *FRANCOLINUS SEPHÆNA* (Smith). Crested Francolin.

*a.* ♀. Gambo's, Manzamnyama River.

39. *PTERNISTES SWAINSONI* (Smith). Swainson's Francolin.

*a.* ♀. 21 March. Gambo's, Manzamnyama River.

*b.* ♀. 24 „ Nonyonko's, „

40. *NUMIDA CORONATA*, Gray. Common Guinea Fowl.

*a, b, c.* 3 ♀ ♀ juv. 17 March. Gambo's, Manzamnyama R.

*d.* ♂ juv. 20 „ „ „

*e.* Imm. „ „ „

*f.* ♀ imm. 17 „ „ „

*g.* ♀ imm. 19 „ „ „

*h.* ♂ ad. 17 „ „ „

This is an interesting series, showing the plumage at various ages. In the young bird, represented by specimens *a* to *d*, the bony helmet is absent, and the head is covered instead with short downy feathers of black and pale buff, arranged in alternate longitudinal bands; the throat is pale grey, the lower neck all round and upper breast are black, each feather having a central white streak; secondaries with transverse white bands, not spots as in the adult; on the back are a number of reddish-brown feathers with black and white margins, intermixed with the normally coloured ones.

The immature birds (*e* and *f*) are losing the downy feathers of the head, and the helmet is commencing to develop, appearing as a central bony tubercle. A few streaked feathers remain on the neck, and the secondaries are barred as in the young.

41. *LOBIVANELLUS LATERALIS* (Smith). Wattled Plover.

*a.* ♀. 9 March. Khami River.

42. *HOPLOPTERUS ARMATUS* (Burch.). Blacksmith Plover.

*a.* ♂. 21 March. Gambo's, Manzamnyama River.

*b.* ♀. 22 „ „ „

43. *ÆGIALITIS TRICOLLARIS* (Vieill.). Three - banded Plover.

a. ♀. 19 March. Gambo's, Manzamnyama River.

44. *PAVONCELLA PUGNAX* (Linn.). Ruff.

a. ♀. 19 March. Gambo's, Manzamnyama River.

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X.—*Notes upon some South African Birds observed during a Journey through Portuguese Nyassaland (July and August 1908).* By Major J. STEVENSON HAMILTON, Warden Tvl. Game Reserve.

THE route lay between the 12th and 14th parallels of south latitude, and from about the 40th to the 30th parallel of east longitude.

Twenty-five miles from the coast or thereabouts the country rose rapidly in altitude, and remained at an approximate average height of 1500 feet until the foot of the Nyassa hills was reached. The middle country thus included consisted without exception of rolling terrain, intersected by occasional ranges of hills, dotted with granite outcrops, and covered with an unvarying garment of dense, thornless, and largely undeciduous dwarf forest. The climate at this season was cool and equable, the air being exceptionally dry and fresh for a tropical zone of that altitude.

Water, on the whole, was not abundant, but was very much more so than is the case in the Eastern Low Country of the Transvaal. Owing to the exigencies of the journey, it was quite out of the question to make any extensive observation of birds and none at all of mammals, although indications were not wanting of rich possibilities in both fields. There was neither time nor opportunity for the preservation of skins; and even the little collecting and classifying work it was possible to do was conducted under considerable difficulties. The results of the latter I append.

Bird life, upon the whole, did not differ to any great extent to that met with in the Transvaal Low Country, and

approximates, I should imagine, rather to that of South than to that of North Central Africa. Many purely South African species were observed, and it was naturally to such that I devoted most attention. A mountain barrier of over 4000 feet, rises betwixt British and Portuguese Nyassaland, and at its higher elevations bird life was found to be extremely scarce. In fact during one day's march, at an elevation of 4200 feet. the only representatives of the avifauna noticed were two Pied Crows and a little lower down some Helmet-Shrikes.

The scarcity of the Accipitres, especially of the Vulturidæ, was a marked feature: I did not, in fact, see one single Vulture of any description before crossing the Nyassa mountains. Very marked, too, was the absence of *S. concolor*, whose querulous "Go away!" is so well known in the South African bush, and, indeed, in forest countries to the west on the same parallel of latitude.

Francolins were but rarely heard or met with; Sand-Grouse not at all. A single *Coturnix* was noticed at an elevation of 2500 feet, but there was no opportunity of determining the species to which it belonged.

1. CORVULTUR ALBICOLLIS. White-necked Raven.

Very common throughout the province both in uninhabited forest and near habitations up to a height of 3000 feet. Always extremely tame and fearless.

2. CORVUS SCAPULATUS. Pied Crow.

In great numbers at the coast, and very common all along our route right through to Lake Nyassa, especially near villages and other habitations. A pair were observed on the mountains east of the lake at an elevation of 4200 feet, being the only birds noticed thereabouts. They appeared usually in pairs.

None of the genus *Buphaga* were noticed along the route.

3. LAMPROCOLIUS CHLOROPTERUS. Green-winged Glossy Starling.

A good many of these birds were observed in small flocks

of six to ten individuals near the Lureco and Lugenda rivers, at an approximate altitude of 1500 feet.

4. *SYCOBROTUS STICTIFRONS*. Spot-headed Weaver-bird.

A few pairs seen in bush near the banks of the Lugenda and Msalu rivers.

5. *LAGONISTICTA JAMESONI*. Jameson's Ruddy Waxbill.

This or a very closely allied species was common throughout the centre of the province in large flocks wherever there were old native lands.

6. *LAGONISTICTA BRUNNICEPS*. Little Ruddy Waxbill.

Not noticed east of the Lugenda (long. 36° E.). Thence as far as the foot of the Nyassa mountains was always pretty numerous in the neighbourhood of native lands, either in pairs or a few together.

7. *LAGONISTICTA NIVEOGUTTATA*. Peters's Ruddy Waxbill.

Generally met with in the bush in the neighbourhood of all the principal rivers, a few together.

8. *ESTRILDA ANGOLENSIS*. Blue-breasted Waxbill.

Seen usually in pairs westwards from the Lugenda River, in the neighbourhood of the millet-fields. Always very confiding and tame.

*Serinus*.—A very large number of birds of this genus, no doubt embracing several species, were seen about the extensive lands near Mtarika's on the Lugenda, but time prevented any attempt at collection, except

9. *SERINUS IMBERBIS*. Van der Decken's Seed-eater,—which was very numerous both singly and in flocks.

10. *EMBERIZA FLAVIVENTRIS*. Golden-breasted Bunting.

Seen between Ibo and Pemba near the coast, usually five or six together, perching on the trees of the thick forest and very tame.

11. *MOTACILLA VIDUA*. Pied Wagtail.

Observed on the Lureco River and also at Lake Nyassa. Only two or three seen.

12. CINNYRIS LUDOVICENSIS. Northern Double-collared Sunbird.

One only observed near the Lugenda River.

13. CINNYRIS GUTTURALIS. Scarlet-chested Sunbird.

A pair seen at Kissanga on the coast, and occasionally met with along route.

14. UROLESTES MELANOLEUCUS. Long-tailed Shrike.

Met with throughout the bush country from the coast to about the Lugenda River. Above an elevation of 1800 feet or thereabouts no more were seen. Always noticed a few together.

15. TELEPHONUS SENEGALUS. Black-headed Bush-Shrike.

This bird appears to be sparingly distributed throughout the bush country, especially west of the Lugenda, but is nowhere common.

16. PRIONOPS TALACOMA. Smith's Helmet-Shrike.

Met with everywhere throughout the route from within a few miles of the coast right up to Nyassa. Usually observed in parties of not less than six and not more than twenty individuals ; they frequented both the uninhabited forest and the cultivated millet-lands. It was also met with up in the mountains at a height of between 3000 and 4000 feet, where other birds were infrequently encountered.

*Crateropus*.—During the journey I was unable to obtain a specimen of a Babbler nor even to get a sight of one, though on a few occasions I heard them in the bush not far off. To the best of my belief, the chattering was not quite similar to that of *C. jardinii*, which is so very common in the neighbourhood of the Sabi River, in the Eastern Transvaal. The genus is, however, I should say, not very strongly represented in so far as the particular line of country traversed is concerned.

17. PYCNONOTUS LAYARDI. Black-capped Bulbul.

A few individuals seen near the coast at an elevation of about 400 feet ; not noticed afterwards.

*Turdus*.—I twice saw a specimen of a rufous- or orange-breasted Thrush, hopping about on the ground in the bush country, but on neither occasion had the means of collecting it.

18. *DICRURUS AFER*. Fork-tailed Drongo.

An extremely common bird all along the route, up to an elevation of about 2500 feet. Wherever seen it was always very tame and fearless.

19. *HIRUNDO SMITHI*. Wire-tailed Swallow.

Probably by far the most numerous species of *Hirundo* in the province, and met with all along the route excepting the high altitudes. Usually met with in pairs, and near habitations and water. In the evenings large numbers might be noticed hawking insects over the surface of the larger rivers and near the shores of Lake Nyassa. A pair were building a nest (August) under the eaves of the Portuguese Commandant's house at Mluluka, and another pair had begun to do the same thing under the iron deck-screen of one of the Nyassa steamers while lying near Fort Johnston. During her subsequent voyage up the lake to Mtengula (a distance of about 150 miles) and back again, these two Swallows remained constant attendants upon the steamer, continually fluttering backwards and forwards underneath the deck-covers. The nest appeared to be about half completed.

20. *HIRUNDO PUELLA*. Lesser Stripe-breasted Swallow.

Met with from Kissanga on the coast as far as the Lugenda, becoming less common as we travelled west. Near the Mntepuesi River and tributaries these Swallows were constantly seen in considerable flocks hawking flies over the watercourses.

(*Hirundo cucullata* was not observed, although I was constantly on the look-out for this South African migrant.)

21. *HIRUNDO MONTEIRI*. Monteiro's Swallow.

This Swallow was met with on two occasions near the coast; on each the birds were flying high in parties of six or



eight. The flight appeared to differ in some degree from that of other Swallows, consisting, when I observed it, of a succession of darts at insects followed by poises, when the birds remained nearly motionless with fluttering wings, not at all dissimilar to the habit of some of the smaller Falconidæ.

22. *PSALIDOPROCNE HOLOMELÆNA*. Black Rough-winged Swallow.

A small flock of what I took to be these Swallows were seen late one afternoon (early August) flitting around the large shade-trees on the banks of the Lugenda River.

23. *SCOPUS UMBRETTA*. Hammerkop.

Met with near all the rivers on the route.

24. *HERODIAS GARZETTA*. Little Egret.

Met with at Ibo and Kissanga, and a few seen on the Lugenda.

25. *MELANOPHOYX ARDESIACA*. Black Heron.

One seen on the Lugenda.

26. *HAGEDASHIA HAGEDASH*. Hadadah.

Seen in small flocks on the Lugenda and Msalu rivers.

27. *NYROCA ERYTHROPHALMA*. South African Pochard.

Met with on the Lugenda.

28. *VINAGO DELALANDII*. Green Pigeon.

Not met with until reaching the eastern shore of Lake Nyassa.

29. *TURTUR CAPICOLA TROPICUS*. Tropic Turtle-Dove.

Very common all along the route.

30. *ŒNA CAPENSIS*. Namaqua Dove.

Not seen east of the Lugenda River; here in the old lands, however, a considerable number were observed.

31. *CHALCOPELIA AFRA*. Emerald-spotted Dove.

Occurred in pairs and very common from the coast to the Lugenda River; west of that point no more were seen.

32. *FRANCOLINUS COQUI*. Coqui's Francolin.

Seen on the Missolo River and occasionally elsewhere in the bush country, but nowhere common.

33. *FRANCOLINUS SHELLEYI*. Shelley's Francolin.

A few pairs of this Francolin were seen as far west as the Lugenda. Like *F. coqui*, however, it seemed very scarce.

34. *PTERNISTES SWAINSONI*. Swainson's Red-necked Francolin.

I saw a single pair of what I took to be these Francolins, near the Msalu River, and occasionally heard their call.

35. *NUMIDA MITRATA*. East African Guinea Fowl.

Encountered throughout most of the bush country. Habits generally appeared much as those of *N. coronata*, but the birds appeared to have a custom which I have not noticed in the southern species, namely, after the morning forage was over, instead of going off and hiding in the long grass during the heat of the day, they would fly up into the branches of large trees, either growing in swamp or surrounded by dense undergrowth or cane-brake, where they appeared to remain until the latter part of the afternoon, when they would fly down to feed.

36. *GUTTERA EDOUARDI*. Crested Guinea Fowl.

I saw one pair in captivity at Ibo, said to have been obtained on the coast.

Family *Otidæ* conspicuous by its absence all along the route.

37. *ÆDICNEMUS VERMICULATUS*. Water Dikkop.

One individual seen on the Lureco River.

38. *LARUS CIRRHOCEPHALUS*. Grey-headed Gull.

Numerous on Lake Nyassa.

39. *TACHORNIS PARVA*. Palm Swift.

Encountered all along the route wherever there were palm-trees. Once at the Msalu River, and again on Lake Nyassa, I saw a considerable number of these birds hawking insects where there were no palms in the neighbourhood.

At the Msalu they were in company with a number of *H. smithi* flying over old native lands and around undeciduous thornless trees. They appeared generally in pairs and in company with *H. smithi*, as above, or with *H. puella*.

40. CAPRIMULGUS FOSSIL. Mozambique Nightjar.

Occasionally seen on route as far as Lugenda. Female specimen secured had very indistinct white markings on the outer tail-feathers.

41. CORACIAS CAUDATUS. Lilac-breasted Roller.

Occurred sparingly along the route. The colours appeared paler generally than in specimens from Eastern Transvaal and than in those afterwards seen in British Nyassaland.

42. CORACIAS MOSSAMBICUS. Purple Roller.

Very rare along route. I made out what appeared to be an individual of this species with my field-glasses, but could not get very close.

43. MELITTOPHAGUS MERIDIONALIS. Little Bee-eater.

Occurred in parties near most of the chief streams. When darting at flies from their perches on the trees by the rivers I occasionally saw individuals turn what appeared to be complete somersaults in the air, before returning to their companions.

44. CERYLE RUDIS. Pied Kingfisher.

Observed on all the larger streams west of the Msalu, and particularly abundant on the Lureco, sometimes three or four together.

45. CERYLE MAXIMA. Giant Kingfisher.

A few seen on the Lureco and Lugenda rivers.

46. HALCYON SWAINSONI. Grey-headed Kingfisher.

One individual seen on the Lugenda.

47. LOPHOCEROS ERYTHORHYNCHUS. Red-billed Hornbill.  
Numerous in the bush country.

Several of the Indicatoridæ seen and heard, though not numerous. Species not identified.

48. *TRACHYPHONUS CAFER*. Crested Barbet.

One seen in the bush country near the Mntepuisi River.

49. *TURACUS LIVINGSTONII*. Livingstone's Lourie.

One seen on the Lureco, and constantly heard.

50. *PŒOCEPHALUS FUSCICAPILLUS*. Brown-headed Parrot.

Occurred all the way along route, though nowhere very numerous.

51. *EUTOLMAËTUS SPILOGASTER*. African Hawk-Eagle.

I saw what I conceived to have been an individual of this species on the Lugenda River.

52. *EUTOLMAËTUS BELLICOSUS*. Martial Eagle.

None met with east of the Msalu River, thence to the Lugenda a few seen : but everywhere uncommon.

53. *HALIAËTUS VOCIFER*. Fish-Eagle.

Met with on all the larger rivers and streams.

54. *HELOTARSUS ECAUDATUS*. Bateleur.

Fairly well distributed as far west as the Lugenda.

55. *ASTURINULA MONOGRAMMICA*. African Buzzard-Eagle.

A few specimens seen in the bush country.

56. *MILVUS ÆGYPTIUS*. Yellow-billed Kite.

Very common throughout, from the coast to the foot of the mountains, especially near human habitations. In three specimens shot at the Lugenda the edges of the feathers of the crown and nape were grey with dark brown centres, but in all other respects the birds were plumaged as in Selater's description of *M. ægyptius*.

(This bird, which had left the Transvaal Low Country by the middle of March, was first met with on the northward voyage at Mozambique, where a very few were noticed. At Ibo and Pemba it was very numerous in July, and, as stated above, throughout the province in July and August. The first birds returned to the Eastern Transvaal about the 15th of September.)

## XI.—Notes from Cape Colony.

By LIONEL E. TAYLOR, F.Z.S., M.B.O.U.

*HALIAËTUS VOCIFER*.—A freshly killed specimen of this species with the head eaten off, probably by a shark, was washed up on the beach at Muizenburg on the 11th April, 1906.

When at Smitswinkel's Bay near Cape Point on the 14th July, 1906, I saw an adult male flying along the mountain close to the sea.

This fine Eagle has not been previously recorded from the Cape Peninsula or west of Bredasdorp, as far as I am aware; but it is common along the coast east of George, and at Knysna, where it breeds, I have seen three and four flying about together.

*AQUILA VERREAUXI*.—Several pairs of this Eagle are to be found between Table Mountain and Cape Point and on the Drakenstein Mountains eastward to the Swellendam District, where I saw a specimen which had been killed while eating a lamb and was informed that it had killed several other lambs before being shot.

On the 1st July, 1906, I heard that a pair of these birds had been seen at Cape Point, and on the 14th July I went out there in the hopes of finding their nest. In this I was not disappointed, as I found the birds carrying material for the nest to a ledge of rock 50 feet below the top of the rocky precipice and 600 feet above the sea. I was able to watch the birds all the day and noticed that the material which they were carrying to their nest consisted entirely of green branches of the *Rhenoster Bosch*. I have consulted many books in which the nests of Eagles are described, but can find no mention of green material being used for nest-building, except in the case of the nest of *Aquila wahlbergi*, described by my brother Mr. C. H. Taylor in this Journal (vol. iii. p. 29), where he mentions the nest as being thickly lined with bunches of green leaves. With the large amount of dry material available at Cape Point it is curious that the birds should have made use of green branches of a

particularly rough bush which they must have had considerable difficulty in detaching.

On the 15th September, having provided ourselves with ropes and tackle, we set out on foot, a party of five, from Simonstown for Cape Point, a distance of 18 miles, which we covered in  $4\frac{1}{2}$  hours. The next day we commenced operations and Mr. C. E. Lane-Poole, although handicapped by having only one arm, volunteered to go down to the nest. This required considerable nerve, for when once over the cliff he was dangling more than 600 feet above *terra firma*. The nest, composed entirely of green material and only slightly hollowed, was placed on a narrow ledge of rock inclined inwards. It contained one young bird from four to five weeks old, and scattered about were the remains of rock-rabbits (*Procarvia capensis*). Owing to the position in which the nest was placed it was not possible to photograph it or even to make very careful observations, but the young bird was brought safely to the top. While these proceedings were going on the old birds flew about in the vicinity of the nest, and I was ready with a gun to shoot them if they showed fight; but this was not necessary and they were spared in the hope that they would breed again and give us further sport. I was informed by the lighthouse-keepers that these birds are most destructive to poultry. A pair breed at Cape Point every year, and the remains of six nests can be seen on one face of the precipice; from which it would seem that the birds do not reoccupy the same nest every year. I was also informed that as soon as the young birds are able to forage for themselves they are driven away from the neighbourhood by the old birds, and that if one of the old birds is killed the survivor very soon finds another mate.

The usual food of these Eagles is rock-rabbits, but they are said to also kill buck, principally Klipspringers (*Oreotragus saltator*). I heard an authentic story in connection with the latter which may be worth recounting. A farmer near Paarl, while walking towards the mountains, was met by a friend who asked him, in the customary way, where he was going to and what he was going to do; the

farmer replied that he was going to the mountain to get a buck. Seeing that he had no firearm his friend laughed at him, whereupon the farmer pointed to an Eagle, which was quartering the ground on the mountain side, and went his way. Latter on the farmer returned, carrying the buck which had been struck by the Eagle and hurled over a precipice, beneath which it was picked up. This may sound rather a tall story, but nevertheless I believe it to be true and a not uncommon occurrence. The young Eagle from Cape Point was kept by me for some time. It eat raw meat ravenously and became quite tame; unfortunately, however, during a spell of very wet weather, it caught cold, and becoming paralyzed in its legs, eventually died.

*COSSYPHA SIGNATA*.—On the 14th July, 1906, I was fortunate enough to obtain a female of this species at Smitswinkel's Bay, between Simonstown and Cape Point; it was shot on the ground on a very bleak and exposed part of the mountain. Previously it had only been recorded from the eastern half of Cape Colony and Natal.

*PHALACROCORAX LUCIDUS*.—On the 15th September, 1906, I found a colony of these birds breeding near the extreme end of Cape Point. The nests were placed on ledges of rock about 50 feet above the sea on the mountain side; all the nests contained either three eggs, young, or fully fledged birds.

*PHALACROCORAX CAPENSIS*.—This species was also nesting close by, but most of the birds were only mating, so that they are considerably later in breeding than the preceding species. I also found them nesting on Cape Maclear. As far as I know, the nesting of Cormorants on the mainland in South Africa has not been previously noted; they usually nest on the islands close to the coast. At the nest containing young birds were heaped up large piles of regurgitated fish, the stench from which was quite unbearable.

*GERONTICUS CALVA*.—A Bald Ibis was shot at Milnerton, near Cape Town, about the 27th August, 1906. The occurrence of this bird so close to the sea is perhaps worth recording. It is

usually confined to the mountainous districts of South Africa and has been recorded from Tigerhoek in the Caledon District.

*SULA CAPENSIS*.—On the 17th June, 1906, the beach between Muizenberg and Strandfontein in False Bay was lined with thousands of heads and wings of Gannets. They were washed up by the tide and lay almost touching each other every few yards. The sea was very calm at the time and I cannot account for their presence in such very large numbers. As far as I could ascertain, they had not been killed by the fishermen, though the latter often do kill a few for the sake of the feathers, but never in such a wholesale manner as this. All the birds were in adult plumage, and at this season of the year they are always at sea and not on the breeding-islands.

On the 31st December, 1907, I was fortunate enough to be able to pay a visit to Bird Island, in Algoa Bay, and my visit was of exceptional interest, as the breeding-season for Gannets and other birds was in full swing. The sight of countless numbers of Gannets breeding on such a small area is one never to be forgotten, but as it has already been so often described I will merely mention one or two points of interest.

Everyone who sees the birds packed in a solid mass on the ground wonders how they ever find their own eggs or young ones, yet they seem to alight right on their nests without any difficulty. After carefully watching the birds for about two hours, seated within a few yards of them, I noticed, however, that they do not alight directly on their nests, but often several yards away and are at once set upon by all the birds near, who give the unfortunate intruder vicious pecks on its head until it moves on and finds its own nest. As soon as the bird arrives at its nest a most comical performance is gone through, this bird and the one I took to be its mate rubbing their necks together for several seconds with their beaks pointing up in the air. A proceeding very similar to this is described in the "Birds of the South Orkney Islands" ('Ibis,' ser. 8, vol. vi. p. 154) under Ringed Penguins, and the birds on the left of the illustration which faces page 152 exhibit exactly the attitude of the Gannets which I have endeavoured to describe. It seems probable to me



that the birds find their nests by recognizing their mates or the birds belonging to the nest in the immediate vicinity of their own, and it is at any rate obvious that they are made painfully aware of their mistake when they alight near the wrong nest.

About 200 tons of guano are collected on Bird Island yearly, and after the rocks have been scraped bare of guano, feathers, rubbish, and clay are spread over the rocks to give the birds a foundation for their nests in the following year, as it is thought that they might otherwise desert the spot.

*BRADYPTERUS SYLVATICUS*.—Last year I obtained two specimens of this little-known Warbler at Knysna. They are found only in very thick forest and are extremely difficult to procure. Although belonging to one of the genera comprising the Reed Warblers, they are never, as far as I know, found near reeds.

*PHLEXIS VICTORINI*.—I found this Warbler to be very plentiful in many localities round Knysna, but I think that it is without exception the most difficult bird I ever tried to procure a specimen of. The reason for this is its extreme tameness and its habit of creeping about in the “*fein bosch*”; one might follow it for days and never get a shot which would not blow it to pieces. I do not agree with Dr. Stark, who says that it has a somewhat feeble song. For the size of the bird it has, in my opinion, an extremely powerful note, comparable with that of some of the Sunbirds.

*LAGONOSTICTA RUBRICATA*.—I obtained three specimens of this Waxbill at Knysna and Keurbooms River in the same District, and I also saw one male near Grootvaders Bosch in the Swellendam District. It has not been previously recorded west of Grahamstown, so that its range is now considerably extended.

*GRAUCALUS CÆSIUS*.—I shot one of these Cuckoo-Shrikes in the forest of Grootvaders Bosch, this being probably its extreme western range. It is a common species in the Knysna Forest.

*LANIUS COLLURIO*.—I obtained a pair of these Shrikes at

Knysna in January 1908, but I could not hear that it had been seen there before. In Stark and Selater its western range is given as Port Elizabeth.

*CHRYSOCCYX SMARAGDINEUS*.—This Cuckoo, probably the most beautiful of all African birds, is sadly in need of protection at Knysna, where it is persecuted every year from the day it arrives until the day it departs. One man told me that he often killed as many as 60 in a season. Unfortunately it falls an easy prey to anyone who can imitate its call, and there are certain places near Knysna which it regularly frequents every year. From all accounts it is certainly a much rarer bird at Knysna than it used to be. Though a migratory species, it would appear, from the fact that the same parts of the forest are frequented by them every year, that some of the birds must return annually.

*HAPALODERMA NARINA*.—The same remarks unhappily apply also to the Trogon, but being a resident it stands in even greater danger of being exterminated. The extreme delicacy of its skin may perhaps mitigate this danger, for even a skilled taxidermist will think twice before skinning very many of them. Fortunately, too, for the bird, it only calls during the breeding-season, and unless one hears the call and can answer it there is a very small chance of finding it; in fact the majority of the inhabitants of Knysna are not aware that it stays there during the winter.

*ACCIPITER MELANOLEUCUS*.—I was fortunate enough to obtain three specimens of this rare Sparrow-Hawk at Knysna, all being in immature plumage. Although it is well known at Knysna, I could not find anyone who knew it in the adult black plumage. This bears out the statement made in Stark and Selater that "the black phase is comparatively rare"; the depredatory habits of the bird were also fully borne out by my informants.

*STRIX FLAMMEA*.—I came across a couple of these Owls in a small cave along the Keurbooms River. The floor of the cave was thickly covered with pellets, many of which I examined on the spot, as well as taking away about 20 for further

examination. Of the skulls contained in these pellets fully 50 per cent. were those of Bats, the remainder being Vlei rats (*Otomys irroratus*). Bats are not included by Stark and Selater in the diet of these birds, although I believe in America they do form a small percentage.

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## XII.—*Miscellaneous Notes.*

By ALWIN HAAGNER, F.Z.S., Tvl. Zoological Gardens.

DIOMEDEA CAUTA, Gould.

[*Thalassogeron layardi*, Salv., Rehw. Vögel Afrikas, i. p. 23.]

In 'The Ibis' for October 1905 (p. 558) Mr. Ogilvie-Grant states that, on comparison with birds collected in New Zealand and those in the Tring Museum, *Thalassogeron layardi* becomes a synonym of *D. cauta*, Gould.

There is a single example of this bird in the collection of the Transvaal Museum, collected by the late J. v. O. Marais at Knysna, C.C., on the 23rd August, 1899. This bird has the belt of black mentioned by Gould in his description of *cauta*. The following is a description of this, the second or third known example from South Africa :—

Head and neck white; a dark slate-coloured line from the base of the culmen to the eye (where it spreads over the region in front of the eye and is here very dark), extending over the eye as a narrow eyebrow and gradually merging into the pale slate-grey of the hinder crown and nape; rest of hind-neck and sides darker slate-grey, fading into white on the sides of the upper breast. Remainder of plumage agreeing with that of the adult.

Total length of skin 930 mm.; wing 560; culmen 134 (measured in a straight line from tip of bill to base of culmen on forehead); height of bill at base 50.

[Eyes dusky; bill sky-blue; tarsus, feet, and claws white. —*J. v. O. Marais.*]

## LARUS CIRROCEPHALUS, Vieill.

The Museum contains a good series from Van Wijk's Vlei, Carnarvon, C.C., collected by Lieut. H. A. P. Littledale during the months of July, August, and October—two from Bloemfontein, O.R.C., collected in June (*C. B. Horsbrugh*), and two from Shesheke, on the Zambesi River (*Wilde*: October and November).

An immature bird from Van Wijk's Vlei, collected in July, has the crown washed with grey, the region of the eye and beyond the ear-coverts dark grey-brown, the scapulars and median coverts grey on the basal half of the feathers, the apical portion being pale brown tipped with whitish. The two first primaries are without the white band near the tip characteristic of the adult; while the remaining primaries are conspicuously tipped with white.

[Iris dark brown; bill brownish horn, tip dark brown; feet dull light brown, claws black.—*H. A. P. Littledale.*]

## PLECTROPTERUS GAMBENSIS.

Dr. Reichenow ('*Vögel Afrikas*,' i. p. 136) says that several examples of this Goose from Victoria Nyanza and the Niger have the cheeks, chin, flanks, and under tail-coverts mixed with black, and as these specimens are distinctly an intermediate form between *gambensis* and *niger*, it is doubtful whether the latter is not only an individual variation. From the series of living birds in the Transvaal Zoological Gardens, many of which have been a number of years in captivity, this view is certainly borne out. As will be seen from the following series of seven varieties, it is impossible to say where *gambensis* ends and *niger* begins:—

- a. Only the middle of the abdomen white; a little admixture of white on the under tail-coverts. Not a trace of white on head and neck. (Pretoria and Bloemfontein districts.)
- b. A small white spot behind the eye; centre of abdomen white; thighs and tail-coverts mixed with white.
- c. Chin spotted with white; flanks and under tail-coverts strongly mixed with white.

- d.* Large white spot behind the eye ; many of the breast-feathers with white tips ; flanks, under tail-coverts, and thighs mixed with white. (Ermelo district.)
- e.* White markings on face ; thighs &c. mixed with white ; middle of lower breast also white. (Pretoria district.)
- f.* White behind the eye ; white of underparts continued up to the middle of the upper breast. (Lydenburg.)
- g.* Whole face white, with small scattered spots of dark brown ; white of underparts extended up to lower throat. (N.W. Rhodesia.)

Several specimens have the whole abdomen white. The shoulder-spot is small in some, larger in others, and mixed with black in a few examples. The males are more inclined to pied plumage than the females, have larger wattles, and are of much larger size. A gosling in the down is blackish above shaded with yellow, a few greenish-black feathers appearing on the sides of the body and on the mantle, the latter being edged with reddish brown, the former with white. Breast, face, and chin yellowish ; remainder of the underparts dark grey washed with yellow.

Culmen 34 mm. ; tarsus 23.

*COLIUSPASSER ALBONOTATUS*, Cassin.

So far as I know, the female of this species is still undescribed. The Museum contains a large series of this bird from Weenen, Natal, collected by Mr. E. P. B. Arnold.

*Adult female.*—Above yellowish brown, the centres of the feathers being blackish brown, giving to the entire upper surface a streaked appearance, similar to that of *Pyromelana orix* ♀. Least wing-coverts tipped with yellow, giving a smudgy yellow patch on the shoulder ; long median coverts and greater coverts edged with dirty white, forming an ill-defined white speculum ; secondaries also edged with white on the outer web for the terminal half, basal half with rusty olive ; bend and edges of wing pale yellow ; eyebrows pale yellowish ; cheeks and throat washed with pale orange-yellow ; breast and flanks tawny-brown, centre of breast

strongly tinged with yellowish ; sides of breast and body and flanks streaked with brown and washed with dusky ; centre of abdomen and under tail-coverts white, slightly washed with pale yellow.

*Young male.*—Like the female, but browner (less yellow) above, and greyer below.

*Description of a new Bradypterus from West Pondoland.*

BRADYPTERUS PONDOENSIS, sp. nov.

Resembling *Bradypterus sylvaticus*, Sund., but smaller and of an olive-brown tinge, more on the olive side, whereas *sylvaticus* is more inclined to the russet ; flanks and under tail-coverts yellower than those of *sylvaticus*.

This is a closely related form of *sylvaticus* ; the latter has hitherto only been definitely recorded from Knysna, Cape Colony (by Victorin). The Transvaal Museum possesses two specimens of *sylvaticus* collected by J. v. O. Marais, and in Mr. Lionel Taylor's private collection are two more collected by himself—all four from Knysna.

*Description.*—Above dark brown, with an olive tinge (much darker than in *sylvaticus*), more olive on the sides of the neck. All the wing-feathers (except the primaries) brown, edged with rusty olive ; chin and throat dirty white, speckled with grey, owing to the bases of the feathers being whitish and the tips grey ; sides of body smoky grey, inclining to yellowish on the flanks ; under tail-coverts grey-brown tipped with yellowish white, the shorter ones being more brightly yellow ; centre of lower breast and abdomen whitish, almost pure white in the middle ; axillaries and under wing-coverts greyish, shaded and tipped with pale yellow, those on the outer edge brownish tipped with yellowish ; lores dusky, above which a whitish "commencement" of an eyebrow ; tail dark brown, indistinctly banded with transverse stripes, which are only discernible in certain lights.

Length 140 mm. ; wing 60 ; tail 56 ; tarsus 20 ; culmen 13.

XIII.—*A List of the Birds of the Kaffrarian Frontier.* By  
F. A. O. PYM, Curator Public Museum, Kingwilliamstown.

IN compiling this list of the Birds of the Frontier I have followed the nomenclature of Stark and Selater's 'Birds of South Africa.' Unless otherwise stated, the birds recorded were observed within a few miles of Kingwilliamstown.

1. *CORVULTUR ALBICOLLIS.* (White-necked Raven.)

Fairly common. Nest found on ledge of rock in December contained three eggs.

2. *CORVUS SCAPULATUS.* (Pied Crow.)

Not common near Kingwilliamstown, but becoming more plentiful towards Alice.

3. *CORVUS CAPENSIS.* (Black Crow.)

Very common. Nest found in November contained four eggs.

4. *BUPHAGA AFRICANA.* (Yellow-billed Ox-pecker.)

Rare. Saw two specimens in March 1906 in company with a drove of Wattled Starlings (*Dilophus carunculatus*).

5. *BUPHAGA ERYTHORHYNCHA.* (Red-billed Ox-pecker.)

Very rare. One specimen was shot near Kingwilliamstown, 10th January, 1907.

6. *DILOPHUS CARUNCULATUS.* (Wattled Starling.)

Very common at times. More or less a resident near Kingwilliamstown. Usually in company with the Pied Starling (*Spreo bicolor*).

7. *AMYDRUS MORIO.* (Red-winged Starling.)

Common throughout the year, usually in small flocks. Nests in Krantz. Eggs four in number.

8. *SPREO BICOLOR.* (Pied Starling.)

More common and gregarious than preceding species. Nests in holes in the banks of rivers or ravines. Eggs from two to five in number.

9. LAMPROCOLIUS PHENICOPTERUS. (Red-shouldered Glossy Starling.)

Found all the year round, but are most common from April to June. Have seen the Wattled Starling (*Dilophus carunculatus*) in company with this bird. Nests in hollow tree-trunk. Eggs five in number.

10. LAMPROCOLIUS MELANOGASTER. (Black-bellied Glossy Starling.)

Uncommon. Specimen shot at Kei Road in February 1906. Saw a flock at Kei Mouth in July 1906.

11. ORIOLUS GALBULA. (Golden Oriole.)

An occasional visitor. Specimens shot in March 1902 and February 1906.

12. ORIOLUS LARVATUS. (Black-headed Oriole.)

Fairly common in forest regions. Nest cup-shaped and composed chiefly of *Ptylandsia*. Eggs three in number.

13. HYPHANTORNIS VELATUS. (Masked Weaver Bird.)

Common and gregarious. Nests suspended from trees overhanging water. Eggs usually three in number and of various colours.

14. HYPHANTORNIS SPILONOTUS. (Spotted-backed Weaver Bird.)

By far the commonest of all the Weavers. Gregarious throughout the year. Nests usually suspended from trees overhanging water. Eggs three in number and vary greatly in colour.

15. HYPHANTORNIS SUBAUREUS. (Yellow Weaver Bird.)

Rare. Occasionally met with along the Buffalo River towards East London. Nests in reeds.

16. SITAGRA OCULARIA. (Smith's Weaver Bird.)

Not uncommon, but most frequently met with towards Stutterheim.

17. SITAGRA CAPENSIS. (Cape Weaver Bird.)

Somewhat rare, but becoming more plentiful in the



Victoria East District. Nests usually suspended over water. Eggs four in number and deep blue in colour.

18. *SYCOBROTUS BICOLOR*. (Black-headed Weaver Bird.)

Not uncommon in forest regions. Nests retort-shaped and eggs two or three in number.

19. *AMBLYOSPIZA ALBIFRONS*. (Thick-billed Weaver Bird.)

Uncommon near Kingwilliamstown, but becomes somewhat plentiful in the Stutterheim District and along the Great Kei.

20. *LAGONOSTICTA RUBRICATA*. (South African Ruddy Waxbill.)

Common. Eggs, from two to five in number, are pure white.

21. *ESTRILDA ASTRILDA*. (Common Waxbill.)

Common. Eggs white and often seven or eight in number.

22. *ESTRILDA DUFRESNII*. (Dufresne's Waxbill.)

Common.

23. *ORTYGOSPIZA POLYZONA*. (Bar-breasted Weaver Finch.)

Not uncommon. Shot specimens at Breidbach, 5th September, 1908.

24. *AMADINA ERYTHROCEPHALA*. (Red-headed Weaver Finch.)

Fairly plentiful at times. Specimens shot at Kingwilliamstown 26th May, 1908, 20th October, 1908, and 21st November, 1908.

25. *PYROMELANA ORYX*. (Red Bishop Bird.)

At times fairly plentiful. Shot specimens on Yellow Woods River, Kaffraria, 24th October, 1908.

26. *PYROMELANA CAPENSIS*. (Black-and-Yellow Bishop Bird.)

Fairly common on Yellow Woods River. Shot specimens 10th October, 1908.

27. PYROMELANA CAPENSIS MINOR. (Smaller Black-and-Yellow Bishop Bird.)

Uncommon. Specimen shot near Pirie Forest, 7th September, 1908.

28. UROBRACHYA AXILLARIS. (Red-shouldered Widow Bird.)

Not uncommon. Saw several specimens in breeding-plumage at Yellow Woods 10th October, 1908. Specimen shot at Kingwilliamstown 16th November, 1908.

29. COLIOPASSER PROCNE. (Great-tailed Widow Bird.)

Common. Shot male in breeding-plumage 24th October, 1908.

30. COLIOPASSER ARDENS. (Red-collared Widow Bird.)

Very common. Found nest with three blue eggs mottled with brownish 17th October, 1908, and a second nest with same number of eggs 25th October, 1908.

31. VIDUA PRINCIPALIS. (Pin-tailed Widow Bird.)

Not uncommon. Have never found the nest of this species.

32. PETRONIA PETRONELLA. (South African Rock Sparrow.)

Fairly common.

33. PASSER ARCUATUS. (Cape Sparrow.)

Common at Breidbach, Kingwilliamstown. Nesting between August and December.

34. POLIOSPIZA GULARIS. (Streaky-headed Seed-eater.)

Common. Eggs three to four in number.

35. SERINUS CANICOLLIS. (Cape Canary.)

Common.

36. SERINUS SULPHURATUS. (Large Yellow Seed-eater.)

Common.

37. SERINUS ICTERUS. (Eastern Yellow Seed-eater.)

Common. Found nest with four eggs, 17th October, 1908.

38. SERINUS ALBIGULARIS. (White-throated Seed-eater.)

Rare. Observed specimens at Breidbach 7th February, 1907.

39. *SERINUS SCOTOPS*. (Sundevall's Seed-eater.)  
Uncommon. Specimen shot at Pirie 30th September, 1908,  
and at Kingwilliamstown 2nd November, 1908.
40. *ALARIO ALARIO*. (Mountain Canary.)  
An occasional visitor between May and July.
41. *EMBERIZA FLAVIVENTRIS*. (Golden-breasted Bunting.)  
Common.
42. *FRINGILLARIA TAHAPISI*. (Rock Bunting.)  
Uncommon. Shot specimen at Breidbach 22nd August,  
1908.
43. *FRINGILLARIA IMPETUANI*. (Lark Bunting.)  
Scarce. Specimen shot at Breidbach January 1907.
44. *MIRAFRA AFRICANA*. (Rufous-naped Lark.)  
Fairly common. Specimens shot at Pirie 26th June, 1908,  
and at Yellow Woods September 1908.
45. *TEPHROCORYS CINEREA*. (Red-capped Lark.)  
Very common. By far the most common of all the Larks.  
Shot specimens 23rd September, 1908.
46. *ALÆMON SEMITORQUATA*. (Grey-collared Lark.)  
Uncommon. Observed one specimen, but was unable to  
secure it.
47. *CERTHILAUDA CAPENSIS*. (Cape Long-billed Lark.)  
Rare.
48. *MACRONYX CAPENSIS*. (Orange-throated Long-claw.)  
Common.
49. *ANTHUS CHLORIS*. (Small Yellow-tufted Pipit.)  
Uncommon. Specimen shot at Pirie 31st August, 1908.
50. *ANTHUS RUFULUS*. (Lesser Tawny Pipit.)  
Common.
51. *MOTACILLA VIDUA*. (African Pied Wagtail.)  
Have specimen in collection which was evidently shot in  
Kaffraria, but exact locality is unknown.

52. MOTACILLA LONGICAUDA. (Grey-backed Wagtail.)  
Not uncommon.
53. MOTACILLA CAPENSIS. (Cape Wagtail.)  
Very common.
54. PROMEROPS CAFER. (Cape Long-tailed Sugar-bird.)  
Uncommon. Saw specimens on Amatola Range and at the Hogsback.
55. NECTARINIA FAMOSA. (Malachite Sunbird.)  
Fairly common. Nest found in January 1907 had two eggs.
56. CINNYRIS AFER. (Greater Double-collared Sunbird.)  
Common.
57. CINNYRIS CHALYBEUS. (Lesser Double-collared Sunbird.)  
More common than the preceding species.
58. CINNYRIS AMETHYSTINUS. (Black Sunbird.)  
Common. Nest found in November contained two eggs.
59. CINNYRIS VERREAUXI. (Mouse-coloured Sunbird.)  
Uncommon except on the outskirts of the Pirie Forest, where it becomes more plentiful.
60. ANTHOTHREPTES COLLARIS. (Collared Sunbird.)  
Not uncommon in the Pirie Forest.
61. ZOSTEROPS ANDERSSONI. (Andersson's White-eye.)  
Rare. One specimen shot at the Convent Farm in 1906 was damaged too much for preservation.
62. ZOSTEROPS VIRENS. (Green White-eye.)  
Not uncommon. Specimens from Toise River, June 1905.
63. ZOSTEROPS CAPENSIS. (Cape White-eye.)  
Common.
64. PARUS AFER. (Grey Tit.)  
Rare.
65. PARUS NIGER. (Black Tit.)  
Common.

66. *ÆGITHALUS CAPENSIS*. (Cape Penduline Tit.)

Have not seen the present species near Kingwilliamstown, but have received nests from the Queenstown and Stutterheim Districts.

67. *LANIUS COLLARIS*. (Fiscal Shrike.)

Very common. On two occasions I have seen the eggs of *Coccytes serratus* in the nest of this bird.

68. *LANIUS COLLURIO*. (Red-backed Shrike.)

Not common. Specimens shot at Kei Road, Toise River, and Pirie Forest.

69. *TELEPHONUS SENEGALUS*. (Black-headed Bush Shrike.)

Common. Shot specimen at Breidbach, February 1908.

70. *TELEPHONUS TCHAGRA*. (Tchagra.)

Common. Found nest with two eggs 18th October, 1908.

71. *DRYOSCOPIUS CUBLA*. (Lesser Puff-back Shrike.)

Uncommon.

72. *DRYOSCOPIUS FERRUGINEUS*. (Greater Puff-back Shrike.)

Common towards the Pirie Forest.

73. *LANIARIUS GUTTURALIS*. (Bacbakiri Shrike.)

Very common.

74. *LANIARIUS RUBIGINOSUS*. (Ruddy-breasted Bush Shrike.)

Fairly common in Pirie Forest. Elsewhere sparingly met with.

75. *LANIARIUS OLIVACEUS*. (Olive Bush Shrike.)

Rare. One specimen obtained at Kei Road in February 1907.

76. *LANIARIUS SULPHUREIPECTUS*. (Orange-breasted Bush Shrike.)

Uncommon. Specimen shot at Kei Road, 29th October, 1908.

77. LANIARIUS STARKI. (Southern Grey-headed Bush Shrike.)

Uncommon. Specimens shot at Breidbach 2nd June, 1905, and Berlin 28th July, 1907.

78. PYCNONOTUS CAPENSIS. (Cape Bulbul.)

Not uncommon.

79. PYCNONOTUS LAYARDI. (Black-capped Bulbul.)

More common than the preceding species.

80. ANDROPADUS IMPORTUNUS. (Sombre Bulbul.)

Fairly common, especially in the Pirie Forest.

81. PHYLLOSTROPHUS CAPENSIS. (Cape Bristle-necked Bulbul.)

Scarce. Specimen shot at Pirie, 7th August, 1908.

82. PARISOMA SUBCÆRULEUM. (Tit Babbler.)

Not uncommon. Found nest in September with three eggs.

83. CAMAROPTERA OLIVACEA. (Green-backed Bush Warbler.)

Fairly common in bush country.

84. SYLVIELLA RUFESCENS. (The Crombec.)

Uncommon. Specimen shot 10th April, 1906.

85. APALIS THORACICA. (Bar-throated Warbler.)

Not common.

86. PRINIA HYPOXANTHA. (Saffron-breasted Wren Warbler.)

Scarce. Specimen shot at Pirie, 11th August, 1908.

87. PRINIA MACULOSA. (Cape Wren Warbler.)

Have observed only one specimen.

88. CISTICOLA FULVICAPILLA. (Tawny-headed Grass Warbler.)

Common throughout the year.

89. CISTICOLA ABERRANS. (Smith's Grass Warbler.)

Common. Pirie, 28th August, 1908.

90. CISTICOLA TERRESTRIS. (Wren Grass Warbler.)

Not uncommon. Shot specimen in September 1908.

91. *CISTICOLA SUBRUFICAPILLA*. (Grey-backed Grass Warbler.)

Uncommon and local. Specimen shot at Pirie 10th July, 1908.

92. *SPHENÆACUS AFRICANUS*. (Cape Grass Bird.)

Rare.

93. *SPHENÆACUS INTERMEDIUS*. (Eastern Province Grass Bird.)

Not uncommon. Specimen shot at Pirie 8th September, 1908.

94. *TURDUS OLIVACEUS*. (Cape Thrush.)

Common.

95. *MONTICOLA RUPESTRIS*. (Cape Rock Thrush.)

Common in rocky localities.

96. *MONTICOLA EXPLORATOR*. (Sentinel Rock Thrush.)

Not so common as the preceding and sometimes found in company with same.

97. *MYRMECOCICHLA FORMICIVORA*. (Ant-eating Chat.)

Found sparingly on the open high veld.

98. *MYRMECOCICHLA BIFASCIATA*. (Buff-streaked Chat.)

Uncommon.

99. *PRATINCOLA TORQUATA*. (South African Stone Chat.)

Not common.

100. *SAXICOLA PILEATA*. (Capped Wheatear.)

Not common.

101. *SAXICOLA MONTICOLA*. (Mountain Chat.)

Rare.

102. *THAMNOLÆA CINNAMOMEIVENTRIS*. (White-shouldered Bush Chat.)

Saw specimens inhabiting Krantz at Pirie.

103. *COSSYPHA BICOLOR*. (Noisy Robin Chat.)

Fairly common at Pirie. Specimens shot at Kei Road 26th June, 1908.

104. *COSSYPHA CAFFRA*. (Cape Robin Chat.)  
Common.
105. *COSSYPHA SIGNATA*. (Brown Robin Chat.)  
Uncommon. Specimen shot at Pirie 11th August, 1908.
106. *TARSIGER STELLATUS*. (White-starred Bush Robin.)  
Rare. Specimens shot at Kei Road, 18th August, 1908.
107. *TARSIGER SILENS*. (Silent Bush Robin.)  
Common.
108. *ERYTHROPYGIA LEUCOPHRYS*. (White-browed Ground Robin.)  
Uncommon. Kei Road, May 1904.
109. *ERYTHROPYGIA CORYPHÆUS*. (Cape Ground Robin.)  
Very rare.
110. *LIOPTILUS NIGRICAPILLUS*. (Bush Blackcap.)  
Sparingly met with in the Pirie Forest.
111. *ALSEONAX ADUSTA*. (Dusky Flycatcher.)  
Not uncommon. Pirie, 19th June, 1908.
112. *PACHYPRORA CAPENSIS*. (Cape Flycatcher.)  
Fairly common. Pirie, 11th July, 1908.
113. *PACHYPRORA MOLITOR*. (White-flanked Flycatcher.)  
Fairly common. Found nest with two eggs (blue-green ground spotted with brown) at Breidbach, September 1907. The same nest was reoccupied, presumably by the same birds, in October 1908.
114. *TROCHOCERCUS CYANOMELAS*. (Blue-mantled Flycatcher.)  
Not common.
115. *TERPSIPHONE PERSPICILLATA*. (Paradise Flycatcher.)  
Common.
116. *DICRURUS AFER*. (Fork-tailed Drongo.)  
Common. Nest found in October contained three pure white eggs.



117. CAMPOPHAGA NIGRA. (Black Cuckoo Shrike.)

Rare. Nest found at Perk's Dam 12th November contained two hard-set eggs.

118. GRAUCALUS CÆSIUS. (Grey Cuckoo Shrike.)

Somewhat scarce. Have shot several specimens in the Pirie Forest.

119. HIRUNDO RUSTICA. (European Swallow.)

Occasional migrant, usually visiting us in November.

120. PTYONOPROGNE FULIGULA. (Rock Martin.)

Somewhat migratory in its movements. Not common. Shot specimen at Breidbach, 13th August, 1908.

121. HIRUNDO ALBIGULARIS. (White-throated Swallow.)

Common migrant, arriving about September.

122. HIRUNDO DIMIDIATA. (Pearl-breasted Swallow.)

Uncommon.

123. HIRUNDO CUCULLATA. (Larger Stripe-breasted Swallow.)

Common. Shot specimen 12th October, 1908. Often in company with *Hirundo puella*.

124. HIRUNDO PUELLA. (Smaller Stripe-breasted Swallow.)

Common. Shot specimen 17th October, 1908.

125. PETROCHELIDON SPILODERA. (South African Cliff Swallow.)

Occasionally seen.

126. UPUPA AFRICANA. (South African Hoopoe.)

Common. Young bird shot 28th October, 1908, had the usual white patch on wings divided into two distinct bars.

127. IRRISOR VIRIDIS. (Kakelaar.)

Fairly common, especially at Pirie.

128. CYPSELUS AFRICANUS. (White-bellied Swift.)

Occasionally observed.

129. CYPSELUS CAFFER. (African White-rumped Swift.)

Partial migrant. Arrived in September; a pair reoccupied last year's nest.

130. *CAPRIMULGUS EUROPÆUS*. (European Nightjar.)  
Fairly common.
131. *CAPRIMULGUS RUFIGENA*. (Rufous-cheeked Nightjar.)  
Fairly common.
132. *CAPRIMULGUS PECTORALIS*. (South African Nightjar.)  
Not common.
133. *CORACIAS GARRULUS*. (European Roller.)  
Irregular visitor. Specimens taken February 1902 and January 1908.
134. *EURYSTOMUS AFER*. (Cinnamon Roller.)  
Very rare. Specimen shot 16th April, 1907.
135. *MEROPS APIASTER*. (European Bee-eater.)  
Rare.
136. *DICROCERCUS HIRUNDINEUS*. (Swallow-tailed Bee-eater.)  
Very rare. Specimen shot at Emgwali, Stutterheim District, 21st July, 1908.
137. *CERYLE RUDIS*. (Pied Kingfisher.)  
Uncommon. Occasionally seen on Buffalo River, becoming more common towards the coast.
138. *CERYLE MAXIMA*. (Giant Kingfisher.)  
Not uncommon.
139. *ALCEDO SEMITORQUATA*. (Half-collared Kingfisher.)  
Fairly common.
140. *CORYTHORNIS CYANOSTIGMA*. (Malachite Kingfisher.)  
Fairly common.
141. *HALCYON ALBIVENTRIS*. (Brown-hooded Kingfisher.)  
Common.
142. *COLIUS STRIATUS*. (Speckled Mouse Bird.)  
Common.
143. *COLIUS CAPENSIS*. (White-backed Mouse Bird.)  
Uncommon.

144. *COLIUS ERYTHROMELON*. (Red-faced Mouse Bird.)  
Common.

145. *BUCORAX CAFER*. (Brom-vogel.)  
Common throughout the year in certain localities near Kingwilliamstown.

146. *BYCANISTES BUCCINATOR*. (Trumpeter Hornbill.)  
Rare. More abundant towards the mouth of the Great Kei River.

147. *LOPHOCEROS MELANOLEUCUS*. (Crowned Hornbill.)  
Common at times.

148. *HAPALODERMA NARINA*. (Narina Trogon.)  
Not common. Specimen shot 25th September, 1908.

149. *GEOCOLAPTES OLIVACEUS*. (Ground Woodpecker.)  
Uncommon.

150. *CAMPOTHERA NOTATA*. (Knysna Woodpecker.)  
Fairly common.

151. *DENDROPICUS CARDINALIS*. (Cardinal Woodpecker.)  
Fairly common.

152. *MESOPICUS GRISEOCEPHALUS*. (Olive Woodpecker.)  
Uncommon.

153. *IYNX RUFICOLLIS*. (South African Wryneck.)  
Rare. Specimen shot at Nqamakwe Transkei, October 1908.

154. *INDICATOR SPARRMANI*. (Sparrman's Honey-Guide.)  
Uncommon. Specimens shot at Pirie.

155. *INDICATOR MAJOR*. (Yellow-throated Honey-Guide.)  
More common than the preceding species. Shot specimen at Pirie, September 1903.

156. *INDICATOR VARIEGATUS*. (Scaly-throated Honey-Guide.)  
Uncommon.

157. *INDICATOR MINOR*. (Lesser Honey-Guide.)  
Not common. Specimen shot at Pirie, 10th July, 1908.

158. *LYBIUS TORQUATUS*. (Black-collared Barbet.)  
Fairly common.
159. *TRICHOLÆMA LEUCOMELAS*. (Pied Barbet.)  
Uncommon.
160. *BARBATULA PUSILLA*. (Tinker Bird.)  
Uncommon except at Pirie, where it is more often heard than seen.
161. *CUCULUS SOLITARIUS*. (Black-chested Cuckoo.)  
Usually seen between August and December.
162. *CUCULUS CLAMOSUS*. (Black Cuckoo.)  
Rare. One specimen observed 19th October, 1908.
163. *CHRYSOCOCCYX SMARAGDINEUS*. (Emerald Cuckoo.)  
Not uncommon in Pirie Forest.
164. *CHRYSOCOCCYX KLAASI*. (Klaas' Cuckoo.)  
Rare.
165. *CHRYSOCOCCYX CUPREUS*. (Didric Cuckoo.)  
Visits us in October.
166. *COCCYSTES GLANDARIUS*. (Great Spotted Cuckoo.)  
Rare. Specimen shot at Toise River, 30th October, 1908.
167. *COCCYSTES JACOBINUS*. (Black-and-White Cuckoo.)  
Uncommon. Observed two specimens at Breidbach, 7th November, 1908.
168. *COCCYSTES SERRATUS*. (Black-crested Cuckoo.)  
Not uncommon in October.
169. *CENTROPUS BURCHELLI*. (Burchell's Coucal.)  
Not common.
170. *CENTROPUS SUPERCILIOSUS*. (White-browed Coucal.)  
Not common. Specimen shot at Breidbach, 10th January, 1908.
171. *TURACUS CORYTHAIX*. (Knysna Plantain-eater.)  
Common at Pirie and wooded kloofs throughout Kaffraria.
172. *PŒOCEPHALUS ROBUSTUS*. (Levaillant's Parrot.)  
Common at Pirie. Found nest in tree-trunk, 6th December, 1908.

173. *STRIX FLAMMEA*. (Barn Owl.)

Fairly common. On 1st May, 1904, I found a nest of this species containing seven eggs, four of which hatched during the month. Before the young birds were able to fly and still required the attention of their parents, another hatching of four eggs was completed.

174. *STRIX CAPENSIS*. (Grass Owl.)

Not uncommon. The stomach of a specimen shot 25th November contained nothing but beetles.

175. *ASIO CAPENSIS*. (Marsh Owl.)

Not uncommon.

176. *SYRNIUM WOODFORDI*. (Woodford's Owl.)

Not uncommon.

177. *BUBO CAPENSIS*. (Cape Eagle Owl.)

Rare.

178. *BUBO MACULOSUS*. (Spottled Eagle Owl.)

Common.

179. *SCOPS CAPENSIS*. (Cape Scops Owl.)

Rare.

180. *FALCO MINOR*. (South African Peregrine.)

Uncommon.

181. *FALCO BIARMICUS*. (South African Lanner.)

Uncommon.

182. *TINNUNCULUS RUPICOLUS*. (South African Kestrel.)

Common. Nest found in September contained three eggs.

183. *TINNUNCULUS RUPICOLOIDES*. (Larger Kestrel.)

Not common. Specimens received from Toise River and Breidbach.

184. *AQUILA VERREAUXI*. (Verreaux's Eagle.)

Not uncommon about Kei Road.

185. *AQUILA RAPAX*. (Tawny Eagle.)

Only one specimen observed by me between Kei Road and Draaibosch, Kaffraria.

186. *EUTOLMAËTUS BELlicosus*. (Martial Eagle.)

Fairly common near Kei Road.

187. *SPIZAËTUS CORONATUS*. (Crowned Hawk Eagle.)

The most common of our Eagles. Nesting in Pirie Forest.

188. *LOPHOAËTUS OCCIPITALIS*. (Crested Hawk Eagle.)

Rare.

189. *HALIAËTUS VOCIFER*. (Sea Eagle.)

Occasionally seen on Buffalo River. Is fairly common at the mouth of the Kei River.

190. *HELOTARSUS ECAUDATUS*. (Bateleur.)

Uncommon. Specimen shot at Ntseshe, near Idutywa, 20th July, 1908.

191. *CIRCAËTUS PECTORALIS*. (Black-breasted Harrier Eagle.)

Rare. Specimen shot at Middle Drift, 29th June, 1908.

192. *BUTEO JAKAL*. (Jackal Buzzard.)

Common.

193. *BUTEO DESERTORUM*. (Steppe Buzzard.)

Not common.

194. *ELANUS CÆRULEUS*. (Black-shouldered Kite.)

Common.

195. *ACCIPITER MINULLUS*. (Little Sparrow Hawk.)

Uncommon.

196. *ACCIPITER RUFIVENTRIS*. (African Sparrow Hawk.)

Not common.

197. *ACCIPITER MELANOLEUCUS*. (Black Sparrow Hawk.)

Rare.

198. *ASTUR TACHIRO*. (African Goshawk.)

Fairly common.

199. *MELIERAX CANORUS*. (Chanting Goshawk.)

Rare. One specimen observed.

200. *CIRCUS MAURUS*. (Black Harrier.)

Rare.

201. *CIRCUS RANIVORUS*. (South African Harrier.)

Rare. Observed specimens in 1904, but have not seen them since.

202. *POLYBOROIDES TYPICUS*. (Harrier Hawk.)

Scarce.

203. *GYPS KOLBII*. (Kolbe's Vulture.)

Not uncommon. The farmers about Kei Road and Draai-bosch have suffered somewhat considerably, these birds having taken to killing weak ewes and lambs.

204. *SERPENTARIUS SECRETARIUS*. (Secretary Bird.)

Not uncommon.

205. *PHALACROCORAX LUCIDUS*. (White-breasted Duiker.)

Scarce. Shot specimen at Breidbach, 31st October, 1908.

206. *PHALACROCORAX CAPENSIS*. (Trek Duiker.)

Observed only one specimen in Kaffraria, but at East London it is fairly common during the winter months.

207. *PHALACROCORAX AFRICANUS*. (Reed Duiker.)

Scarce. Specimen shot on Buffalo River, September 1905.

208. *PLOTUS RUFUS*. (Snake Bird.)

Fairly common on all the rivers.

209. *SULA CAPENSIS*. (Malagash.)

Occasionally found at East London.

210. *PELECANUS RUFESCENS*. (Pink-backed Pelican.)

A specimen was shot near East London, May 1904.

211. *ABDIMIA ABDIMII*. (White-bellied Stork.)

Trevelyan records it from Kingwilliamstown, but the only specimens I have observed were at Keiskama Mouth in the Peddie District.

212. *CICONIA ALBA*. (White Stork.)

An irregular migrant, usually seen in flocks.

213. *CICONIA NIGRA*. (Black Stork.)

This species occurs at East London, Keiskama Mouth, and Kei Mouth. Specimen shot at Kei Road, May 1905.

214. SCOPUS UMBRETTA. (Hammerkop.)

Not uncommon.

215. ARDEA GOLIATH. (Goliath Heron.)

Rare.

216. ARDEA CINEREA. Grey Heron.)

Not common.

217. ARDEA MELANOCEPHALA. (Black-headed Heron.)

Fairly common.

218. ARDEA PURPUREA. (Purple Heron.)

Scarce. Specimens shot at Stutterheim.

219. HERODIAS ALBA. (Great White Egret.)

Specimens observed at Keiskama River.

220. HERODIAS GARZETTA. (Little Egret.)

Scarce.

221. BUBULCUS IBIS. (Cattle Egret.)

Uncommon. Specimen shot at Great Kei Drift, 19th October, 1903.

222. ARDEOLA RALLOIDES. (Squacco Heron.)

Not common. Specimen shot at Qwaimiga, 18th May, 1908.

223. NYCTICORAX GRISEUS. (Night Heron.)

Scarce.

224. NYCTICORAX LEUCONOTUS. (White-backed Night Heron.)

Scarce.

225. ARDETTA PAYESI. (Red-necked Little Bittern.)

Rare.

226. GERONTICUS CALVUS. (Bald Ibis.)

Rare. Specimen received from Birds River, Queenstown District.

227. HAGEDASHIA HAGEDASH. (Hadada.)

Rare. Observed specimens at Keiskama and Kei Rivers, June 1908.



228. *PLECTROPTERUS GAMBENSIS*. (Spur-winged Goose.)

I have not observed this bird in Kaffraria, but Major Trevelyan informs me that he shot two specimens at Peel-town (15 miles from Kingwilliamstown) in 1879.

229. *NETTOPUS AURITUS*. (Dwarf Goose.)

Rare.

230. *ALOPOCHEN ÆGYPTIACUS*. (Berg Gans.)

Rare near Kingwilliamstown, but becoming common on the Kei and Keiskama Rivers.

231. *CASARCA CANA*. (South African Shelduck.)

Does not occur in Kaffraria, although it is not uncommon at Sterkstroom in the rainy season.

232. *ANAS UNDULATA*. (Geelbec.)

Rare.

233. *ANAS SPARSA*. (Black Duck.)

Not uncommon.

234. *PÆCILONETTA ERYTHORHYNCHA*. (Redbill.)

Rare. Observed in rainy season. Specimens also received from Sterkstroom.

235. *NYROCA ERYTHROPTHALMA*. (South African Po-chard.)

Rare and only found in rainy season. It also occurs near Sterkstroom.

236. *VINAGO DELALANDII*. (Delalande's Green Pigeon.)

Uncommon. Observed in Pirie Forest and shot at Ndabakazi, January 1908.

237. *COLUMBA PHÆONOTA*. (Speckled Pigeon.)

Common.

238. *COLUMBA ARQUATRIX*. (Olive Pigeon.)

Common, especially in Pirie Forest.

239. *TURTUR SEMITORQUATUS*. (Red-eyed Dove.)

Common.

240. *TURTUR CAPICOLA*. (Cape Turtle Dove.)

Common.

241. *TURTUR SENEGALENSIS*. (Laughing Dove.)

Most common of all our Doves.

242. *ÆNA CAPENSIS*. (Namaqua Dove.)

Not uncommon.

243. *TYMPANISTRIA BICOLOR*. (Tambourine Dove.)

Scarce.

244. *CHALCOPELIA AFRA*. (Emerald-spotted Dove.)

Fairly common.

245. *HAPLOPELIA LARVATA*. (Lemon Dove.)

Scarce.

246. *PTEROCLURUS NAMAQUA*. (Namaqua Sand-Grouse.)

In August 1903 this species was fairly common throughout the district, but it has now almost entirely disappeared.

247. *FRANCOLINUS AFRICANUS*. (Grey-wing Partridge.)

Not uncommon.

248. *FRANCOLINUS LEVAILLANTI*. (Cape Redwing.)

More common than the preceding species. In the Cathcart District the position is reversed.

249. *PTERNISTES NUDICOLLIS*. (Red-necked Francolin.)

Not uncommon in bushy country.

250. *COTURNIX AFRICANA*. (Cape Quail.)

Common from September to January.

251. *COTURNIX DELAGORGUEI*. (Harlequin Quail.)

Scarce. Specimen shot at Breidbach, 7th November, 1908.

252. *EXCALFACTORIA ADANSONI*. (Blue Quail.)

Major Trevelyan informs me that he shot this species near Kingwilliamstown, but I have not observed it myself.

253. *NUMIDA CORONATA*. (Crowned Guinea Fowl.)

Fairly common.

254. *TURNIX HOTTENTOTTA*. (Hottentot Hemipode.)

Scarce. Specimen shot at Yellow Woods, 24th October, 1908.

255. *RALLUS CÆRULESCENS*. (Kaffir Rail.)

Rare. Received specimen from Nqamakwe, Transkei, 29th September, 1908.

256. *CREX PRATENSIS*. (European Corn Crane.)

Scarce, but becoming more plentiful towards the Komgha District, whence I received a specimen in January 1907.

257. *ORTYGOMETRA PUSILLA*. (Baillon's Crane.)

Have not observed species near Kingwilliamstown, but know it to occur at Gungululu Hill, near Umtata, where specimens were shot in March 1907.

258. *SAROTHRURA LINEATA*. (Jardine's Crane.)

Rare. Specimen shot at Draaibosch, September 1906.

259. *SAROTHRURA ELEGANS*. (White-spotted Crane.)

Rare.

260. *LIMNOCORAX NIGER*. (Black Crane.)

Rare.

261. *GALLINULA CHLOROPUS*. (Moorhen.)

Fairly common during the rainy season.

262. *FULICA CRISTATA*. (Red-knobbed Coot.)

Found occasionally on vleis.

263. *PODICA PETERSI*. (Peters' Finfoot.)

Not uncommon.

264. *BUGERANUS CARUNCULATUS*. (Wattled Crane.)

Uncommon. Specimen shot at Kabusie, 21st May, 1908.

265. *TETRAPTERYX PARADISEA*. (Blue Crane.)

Fairly common.

266. *BALEARICA REGULORUM*. (Crowned Crane.)

Observed three specimens at Frankfort, 14 miles from Kingwilliamstown, in May 1908. Can be considered rare.

267. *OTIS VIGORSI*. (Vaal Knorhaan.)

I have not observed this species in Kaffraria, although it occurs near Alice in the Victoria East District adjoining.

268. *OTIS CAFRA*. (Stanley Paauw.)

Scarce. Occasionally met with on the higher veld.

269. OTIS KORI. (Gom Paauw.)

Rare near Kingwilliamstown, but becoming more plentiful in the Victoria East District.

270. ŒDICNEMUS CAPENSIS. (Dikkop.)

Common.

271. CURSORIUS TEMMINCKI. (Temminck's Courser.)

Not uncommon. Shot specimens in August.

272. GLAREOLA MELANOPTERA. (Nordmann's Pratincole.)

Occasional migrant.

273. ACTOPHILUS AFRICANUS. (African Jacana.)

Major Trevelyan has informed me of the occurrence of this bird in Kaffraria, but I have not personally observed it.

274. MICROPARRA CAPENSIS. (Smaller Jacana.)

Major Trevelyan also records this bird from near Kingwilliamstown. It has never come before my notice.

275. STEPHANIBYX CORONATUS. (Crowned Lapwing.)

Common.

276. STEPHANIBYX MELANOPTERUS. (Black-winged Plover.)

Common.

277. ÆGIALITIS ASIATICA. (Caspian Plover.)

Scarce.

278. ÆGIALITIS TRICOLLARIS. (Three-banded Plover.)

Not uncommon.

279. HÆMATOPUS MOQUINI. (Black Oyster-catcher.)

Occurs at East London, but does not come inland.

280. NUMENIUS ARQUATUS. (Curlew.)

Occasionally visits us after heavy rains.

281. TOTANUS GLOTTIS. (Greenshank.)

Occasionally met with, but by no means common.

282. TRINGA MINUTA. (Little Stint.)

Not uncommon.

283. *GALLINAGO MAJOR*. (Double Snipe.)

Rare.

284. *GALLINAGO NIGRIPENNIS*. (Ethiopian Snipe.)

Rare.

285. *ROSTRATULA CAPENSIS*. (Painted Snipe.)

Rare.

286. *LARUS DOMINICANUS*. (Southern Black-backed Gull.)

Common at East London.

287. *OCEANITES OCEANICUS*. (Wilson's Petrel.)

One specimen obtained at East London, June 1902.  
(Washed ashore dead.)

288. *PRION DESOLATUS*. (Narrow-billed Blue Petrel.)

Rare at East London. Specimen obtained July 1903.

289. *PODICEPS CAPENSIS*. (Cape Dabchick.)

Not uncommon. Shot specimen 31st October, 1908.

290. *SPHENISCUS DEMERSUS*. (Jackass Penguin.)

Have observed specimen at East London.

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#### XIV.—Occasional Notes.

7. THE PIN-TAILED WHYDAH (*VIDUA SERENA*).—On going to my aviary this morning I noticed a hen *Vidua serena* on the ground, standing still but breathing very hard. On changing my position a few minutes afterwards I noticed that she had laid an egg. The egg is of a uniform pinkish-white, but the pink tinge is evidently due to the transparency of the shell, which is very thin. One end is more rounded than the other, and about a quarter of the egg at the thinner end is slightly rough and of a purer white. It measures  $\cdot 63 \times \cdot 44$ . I have not noticed this bird building, and the spot where the egg was laid is a bare piece of land with no attempt at a hollow whatever. FRANK BOLUS.

Sherwood,

Kenilworth, near Cape Town,

Sept. 28th, 1908.

8. HUNGARIAN STORK IN NATAL.—The following correspondence appeared in the London 'Times':—

(i.) HUNGARIAN STORK IN NATAL.—Mr. Peter McKenzie writes from Seaforth, Himeville, District Polela, Natal, under date February 4 :—"On January 30, 1909, my nephew shot a Stork with his rifle. On examining it he was astonished to find a metal band round one of its legs. On this band was the following inscription :—'Ornith. Közpout, Budapest, Hungaria, 209.' Should you find room for these few lines, I hope they may come to the notice of those who put the band on. Polela is the south-westernmost district of Natal, adjoining Basutoland."—'*Times*,' weekly ed., Mar. 5th, 1909.

(ii.) BIRD MIGRATION.

*To the Editor of the Times.*

SIR,—The notice of *The Times*, March 3, "A Hungarian Stork in Natal," roused everywhere the greatest interest. This encourages me to ask you the favour of your publicity for the following considerations.

One of the hardest points to solve concerning the problem of bird migration was the question whether our birds, going to Africa for winter-quarters, pass the Equator. The Hungarian Stork shot in Natal is a direct proof that they pass beyond the Equator, and the ringed Stork liberated in North Germany which was killed in the Bushmen's country is a further evidence of the fact. In both cases the identity of the individual was established with full certainty; and this invests them with the highest importance.

The geographical elements of the Hungarian Stork shot in Natal were the following :—

It was liberated on the nest, as young one, at Hidvég, in the south-eastern part of Hungary (Transylvania), lying under N. lat.  $45^{\circ} 30'$  and E. long. (Greenwich)  $25^{\circ} 30'$ , on July 8, 1908, with a ring bearing No. 209. The bird reached Polela in Natal, which lies under S. lat.  $30^{\circ}$  and E. long.  $30^{\circ}$ . The course taken was nearly straight to the south, and passing the Equator, the length of travel in aerial line being about 8600 kilomètres.

As a committee was formed recently at Pretoria for the observation of bird migration after the Hungarian model, and as our Stork penetrated very deeply into the country of our South African friends, the high significance of the case may be judged by this; and I express the hope that the migration of the Stork may soon be clearly established, chiefly if the daily Press, the most modern of great powers, gives it its mighty help, as in the present case.

With the assurance of my highest esteem, believe me, Sir,

Yours very respectfully,

OTTO HERMAN, *Director*.

Royal Hungarian Central Bureau for Ornithology,

Budapest, March 12.

‘*Times*,’ weekly ed., Mar. 19th, 1909.

9. RINGING OF MIGRATORY BIRDS.—According to the last number of ‘*British Birds*,’ Mr. Harry Witherby has also commenced in England the Hungarian and Rositten system of ringing migratory birds. We believe Scotland will follow in the wake, so that it behoves South African ornithologists to keep a keen look-out for such birds in the future, and to notify the Secretary of the S.A.O.U. immediately any ringed bird is procured, giving all data.

10. MARKED WHITE STORK IN BASUTOLAND.—I heard some days ago of a White Stork (*Ciconia ciconia*) having been shot in January by a native at Morija, the Paramount Chief’s village, about 25 miles from here, with a silver ring attached to its leg. I got the chief to send it in for inspection, as he does not want to part with it, and the ring is still attached to the half-dried leg. It bears the inscription “Vogelwarte Rositten 1265 Germania.” Can one find out the history of the bird, as the natives are much interested in it.

J. P. MURRAY.

Maseru, Basutoland,

March 16th, 1909.

[Since receiving the above, Mr. Murray has sent us the

ring referred to, along with another (1416) obtained at Quthing in February. These rings have been forwarded to Rositten, with a request for data of liberation.]

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11. ALLEN'S GALLINULE IN BASUTOLAND.—On the 4th inst. I caught a live example of the rare Allen's Purple Gallinule (*Porphyrio alleni*), which had got entagled in the wire-netting on my vine-trellis. It was a male in beautiful plumage. Frontal shield greeny-yellow, not dusky. Contents of stomach: seeds of water-grasses and other vegetable matter. I procured another specimen at Mafeteng (Basutoland) in January 1898, which was also caught alive in a garden during such heavy rains.

J. P. MURRAY.

Maseru, Basutoland,  
March 16th, 1909.

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12. BLACK STORK BREEDING IN SOUTH AFRICA.—On August 15th a female Black Stork (*Ciconia nigra*) was shot and sent to Mr. Greenland, the Bloemfontein taxidermist, who found a whole egg in the oviduct. He tried to hatch it under a hen, but failed. It has been reported to me more than once that a pair have bred on Thaba Patchoa Mountain in Basutoland, but Selater says they do not breed in South Africa. This matter is worth investigating, and any further evidence I come across will be notified immediately.

K. COWPER JOHNSON.

Westminster, O.R.C.,  
March 4th, 1909.

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13. LONG-WINGED PETREL AT PORT ELIZABETH.—There has so far only been one recorded instance of the Long-winged Petrel (*Estrelata macroptera*) visiting Port Elizabeth. Last week another was captured here. It seems that for three months certain residents residing on the hill at least a mile and a half from the sea-shore were disturbed by the cries of a bird. This bird was heard and seen nightly, flying about five feet from the ground and always hovering around at night, and no matter how dark the night was it



seemed to be able to find its way about. It was evidently in search of scraps, for it haunted back yards. Eventually it made its way into a fowl-house, the door was closed, and it was captured, and turned out to be one of the above-mentioned species of birds. We now have it in our collection at the museum.

F. W. FITZSIMONS, Director, Port Elizabeth Museum.

Port Elizabeth,

Feb. 1st, 1909.

14. RINGED BIRDS.—The following circular has been sent us :—

“The winter-quarters and routes of our migrant birds are until now yet unknown, and there is only one method which leads to positive knowledge on this account: the marking of birds by aluminium rings, a method which has been tried with success in Germany and in Denmark, as a House-Stork marked in Pomerania was caught in Africa, 15° S. of the Equator. The Hungarian Central Bureau for Ornithology has now also begun the marking of young Storks, Herons, Gulls, and Swallows. The aluminium ring is fastened around the leg of the bird and it bears in each case the inscription ‘Budapest,’ followed by a number which corresponds in the entry in the Register-book of the Hungarian Central Bureau for Ornithology. Anyone catching such a marked bird, or hearing of the capture of such, is kindly requested to send the ring on to the Hungarian Central Bureau for Ornithology, József-körút 65, Budapest VIII., Hungary, accompanied by a notice stating the locality, time, and particulars of capture.

“OTTO HERMAN,

“Director of the Hungarian Central  
Bureau for Ornithology.”

“Budapest,

July 1908.”

15. NIDIFICATION OF RED-BILLED OXPECKER.—I cannot find any mention in the Journal of the South African Ornithologists' Union of the nesting of the Red-billed Oxpecker.

One has nested in my cattle-kraal in a hollow tree, 6 feet from the ground, in November (latter part), laid three eggs about the size of a Robin's, white with red spots; nest merely consists of bottom of hole lined with white and grey cow-hairs. Two young just hatched out four days old.

Why should the bird choose light-coloured hair from my cattle when most of the herd are black and red cows, only a few light coloured ones?

J. C. INGLE.

P.O. Sabi, Dist. Lydenburg,  
Dec. 9th, 1908.

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16. FRIGATE BIRD AT BLOEMFONTEIN, O.R.C. — A male Frigate Bird (*Fregata aquila*) was shot in Bloemfontein District the other day, which seems to me somewhat unusual, as the consensus of opinion seems to be that this bird is a true pelagic species, or at any rate oceanic.

C. MCG. JOHNSTON.

Bloemfontein,  
Feb. 5th, 1909.

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17. WHITE-BREASTED DUKERS NESTING IN THE O.R.C. — On September the 14th I shot a pair of White-breasted Cormorants (*Phalacrocorax lucidus*) on Wonderkop Dam, the property of Mr. Chas. Newbury. I also found two nests containing four eggs each. The eggs of one clutch were ready for hatching, several being actually chipped, so they must have been laid in August, a fact worth recording, as Sparrow took eggs in May.

K. COWPER JOHNSON.

Westminster, O.R.C.

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18. YELLOW WAGTAIL AT PORT ELIZABETH. — To-day (20.4.09) my taxidermist, Mr. W. Hodges, shot a specimen of Ray's Yellow Wagtail (*Motacilla campestris*) on the Humewood Beach at Port Elizabeth. It was in company of several Cape Wagtails. The sex is female. It is being mounted for our collection. I believe there is no previous record of it having occurred in Cape Colony.

F. W. FITZSIMONS, Director, Port Elizabeth Museum.

Port Elizabeth, April 20th, 1909.

XV.—*Short Notices of Ornithological Publications.*

7. *The Ibis : a Quarterly Journal of Ornithology.*

The January number of the well-known B.O.U. Journal gives us the following papers on African ornithology:—

- (1) "Field-Notes on the Birds of Southern Kamerun, West Africa." By G. L. Bates, C.M.Z.S.
- (2) "Contributions to the Ornithology of the Soudan.—No. III. On Birds collected by Capt. E. P. Blencowe in the Bahr-el-Ghazal Province." By A. L. Butler, F.Z.S.
- (3) "On the Birds of Bulawayo, South Rhodesia." By E. C. Chubb, Acting Curator, Rhodesia Museum.

The last is a more or less complete list of birds found in the neighbourhood of the capital of South Rhodesia, with field-notes. He records the species (mostly southern forms) as new to Southern Rhodesia. Mr. Chubb has followed the old error in calling one of the Grass Warblers *fulvicapilla* (see also my paper in the 2nd No. Vol. I. of the Journal S.A.O.U.), whereas I have recently shown that the northern form is quite distinct from the true *fulvicapilla*, the latter only inhabiting Cape Colony and possibly Natal. The northern form must now be known as *cinnamomeiceps*, Haagner. [See "A Revision of the South African Species of *Cisticola* (Grass Warblers)," by A. Haagner, Annals Tvl. Museum, August 1909.] With regard to the note on *Centropus senegalensis*, we would draw Mr. Chubb's attention to a paper on the South African species of *Centropus* by Dr. Gunning and A. Haagner in the 1st No. Vol. IV. of this Journal.

*The Ibis : Jubilee Number.*

We have received this extremely interesting special number, which gives us an account of the Jubilee Meeting to celebrate the 50th Anniversary of the B.O.U., a history of the B.O.U. by Dr. Selater, F.R.S., and Biographical Sketches of the original Members of the Union, nearly all of these being illustrated

with photographs. Amongst these we notice, besides the living celebrities well-known to all of us, Professor Newton, who died in 1907, E. L. Layard, J. H. Gurney, Capt. Speke, and R. Swinhoe, only to mention names of special interest to African ornithologists. A list of the Members from 1858-1908 concludes this valuable and interesting publication.

8. *Bulletin British Ornithologists' Club*, No. cxliv., June 1908.

In this number Mr. E. C. Chubb, of the Bulawayo Museum, describes a new Lark, under the name of *Pinarornis rhodesia*, from the Matoppos, Rhodesia, similar to *P. plumosus*, Sharpe.

Mr. Claude Grant, the energetic collector of the Rudd Zool. Exploration of South Africa, describes a new genus and species of Lark, under the name of *Heteronyx ruddi*, resembling *Mirafra cheniana*. He also records from South Africa for the first time *Mirafra zombæ*, Ogilvie-Grant, from the Beira district.

9. *A Monograph of the Petrels (Order Tubinares)*. By F. Du Cane Godman, D.C.L., F.R.S., President B.O.U.

In the April 1908 number of this Journal we reviewed the first number of this sumptuous work. Parts ii. & iii. have now reached us, and treat of the genera *Cymodroma* (conclusion), *Puffinus*, *Priofinus*, *Thalassæca*, *Priocella*, *Majaqueus*, and *Æstrelata*. The South African species figured are—*Puffinus gravis* (O. Reilly), *P. kuhli* (Boie), *Priofinus cinereus* (Gm.), *Priocella glacialoides* (Sm.), *Majaqueus æquinoctialis* (K.), *Æstrelata macroptera* (Smith), *Æ. lessoni* (Garnot), *Æ. incerta*, Schlegel, and *Æ. mollis* (Gould).

As stated in our first notice of this work, it will be of inestimable value to such of our Members at or near the coast who can afford to pay the price of £10 10s., and certainly every museum should possess it.

10. *Annals of the Transvaal Museum*, No. 4, August 1909. This number contains the descriptions of two new South

African birds, by Mr. Alwin Haagner, the Secretary of the Union : *Heliolais kirbyi*, near to *H. erythroptera* ; and *Anthoscopus robertsi*, a well-marked new Penduline Tit, whose nearest ally is *A. caroli* of Sharpe. It contains further a revision of that difficult genus of Grass Warblers known as *Cisticola*, by the same ornithologist. Mr. Haagner's new key to the known South African species will be of value to the working ornithologist, as some confusion has hitherto existed concerning the members of this genus.



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# THE JOURNAL

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THE Editors invite contributions on South African Ornithology from all students. These should, if possible, be typewritten.

Drawings (which, for the purpose of ease of reproduction, should be, as far as possible, in line and without wash) and photographs from nature will be gladly welcomed. Original MSS., drawings, and photographs will, if desired, be returned, after publication, to their owners.

The Editors will be pleased to receive from contributors short extracts from concurrent literature or accounts of the Meetings of Associations dealing with South African Ornithology or of general interest to the Members of the Union.

All documents intended for publication should be forwarded to A. HAAGNER, Esq., Transvaal Museum, Box 413, Pretoria.

This Journal will be issued as often as the funds of the Union permit, subject, of course, to there being sufficient matter suitable for publication.

Fifteen copies of every paper published in the Journal will be reserved for the author free of charge.

The Editors will be pleased to answer, to the best of their ability, through the medium of this Journal, any questions relating to ornithological matters, and to identify ornithological specimens submitted to them.

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